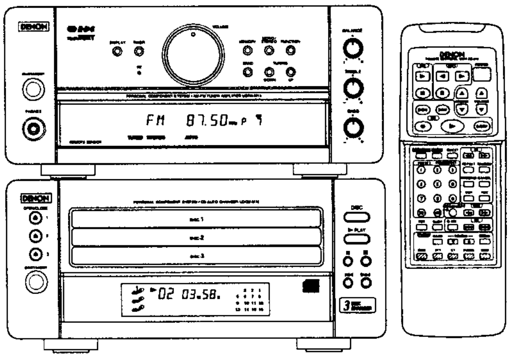
DENON Hi-Fi Personal Component System

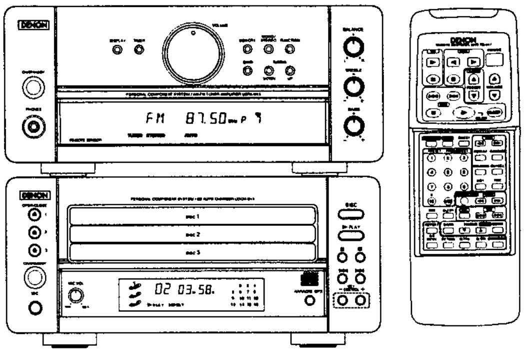
SERVICE MANUAL

MODEL UD-M10

PERSONAL COMPONENT SYSTEM



U.S.A., Canada, Europe & U.K. models



Asia model

Unit No. UDRA-M10 (Tuner Amplifier)
Unit No. UDCM-M10 (CD Auto Changer)

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- **Some illustrations using in this service manual are slightly different from the actual set.**

NIPPON COLUMBIA CO., LTD.

TUNER AMP SECTION

SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 460 kohms, the unit is defective.

SPECIFICATIONS

■ Tuner-amplifier (UDRA-M10)

Reception frequency band:	FM: 87.5 MHz ~ 108.0 MHz AM: 520 kHz~ 1710 kHz (U.S.A. & Canada models) AM: 522 kHz ~ 1611 kHz (Europe, U.K. & Asia models)
Reception sensitivity:	FM: 1.5 µV/75 Ω/ohms AM: 20 µV
FM stereo separation:	35 dB (1 kHz)
Rated output power:	40 W + 40 W (6 Ω/ohms, 1 kHz, T.H.D. 10%)
Low frequency adjustment range:	100 Hz ±8 dB
High frequency adjustment range:	10 kHz ±8 dB
Audio input/output jacks:	CD input jacks, TAPE input/output jacks, AUX. input jacks, MD input/output jacks, PRE OUT (MONO) jack, 3.5 mm headphones jack
Power supply:	AC 120 V, 60 Hz (U.S.A. & Canada models) AC 230 V, 50 Hz (Europe, U.K. & Asia models)
Power consumption:	80 W (U.S.A. & Canada models) 74 W (Europe, U.K. & Asia models)
Maximum external dimensions:	210 (W) x 95 (H) x 322 (D) mm (8-17/64" x 3-45/64" x 12-11/16") (including feet, controls and terminals)
Weight:	4.4 kg (9 lbs. 11 oz)

■ CD auto changer (UDCM-M10)

Wow & flutter:	Below measurable limits (±0.001% W. peak)
Sampling frequency:	44.1 kHz
Optical source:	Semiconductor
Audio input/output jacks:	AUDIO OUT jacks, DIGITAL OPTICAL OUT VIDEO OUT jack (for Video CD, Asia model only) Microphone jack (Asia model only)
Power supply:	AC 120 V, 60 Hz (U.S.A. & Canada models) AC 230 V, 50 Hz (Europe, U.K. & Asia models)
Power consumption:	12 W
Maximum external dimensions:	210 (W) x 97 (H) x 338 (D) mm (8-17/64" x 3-45/64" x 13-5/16") (including feet, controls and terminals)
Weight:	3.0 kg (6 lbs. 10 oz)

■ Remote control unit (RC-846)	(U.S.A., Canada, Europe & U.K. models)
(RC-847)	(Asia model)
Remote control system:	Infrared pulse
Number of buttons:	54 (U.S.A., Canada, Europe & U.K. models) 55 (Asia model)
Power supply:	Two DC 1.5V R6P/AA batteries
Maximum external dimensions:	67 (W) x 197 (H) x 21 (D) mm (2-41/64" x 7-3/4" x 53/64")
Weight:	145 g (5.1 oz) (including batteries)

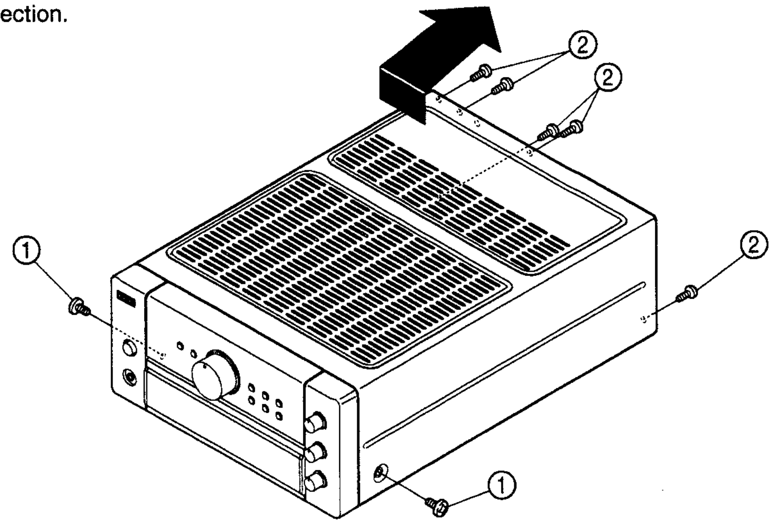
*Maximum dimensions include controls, jacks, and covers.
(W) = width, (H) = height, (D) = depth

DISASSEMBLY

(Follow the procedure below in reverse order when reassembling)

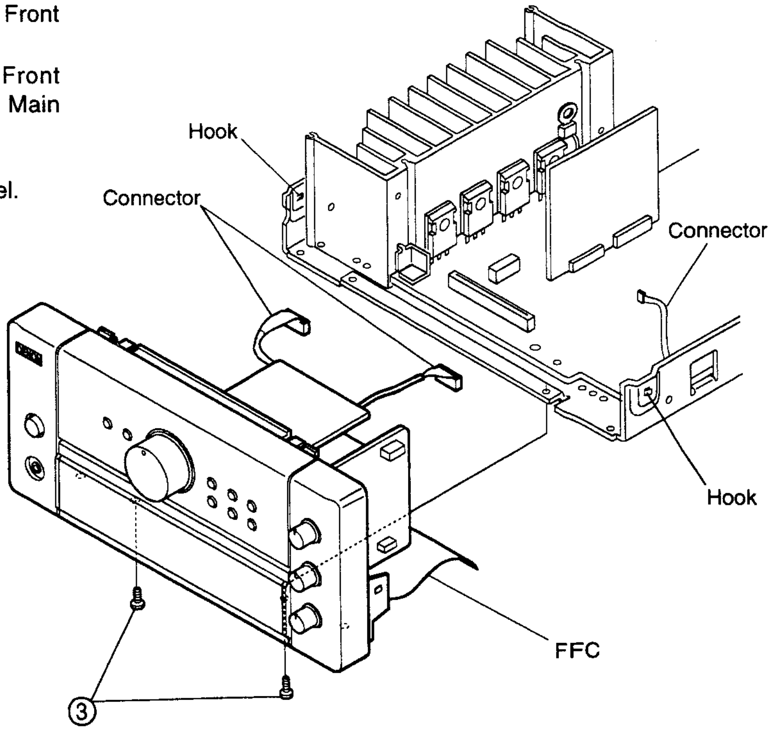
1. Top Cover

(1) Remove 2 screws ① on both sides.
(2) Remove 5 screws ② on the rear.
(3) Detach the Top Cover as shown in the arrow direction.



2. Front Panel

(1) Remove 2 screws ③ on the bottom edge of the Front Panel.
(2) Unplug 2 wire connectors coming out of the Front Panel's P.W.B., and 1 connector coming out of Main P.W.B.
(3) Disconnect FFC from the Main P.W.B.
(4) Release 2 hooks on both sides of the Front Panel.

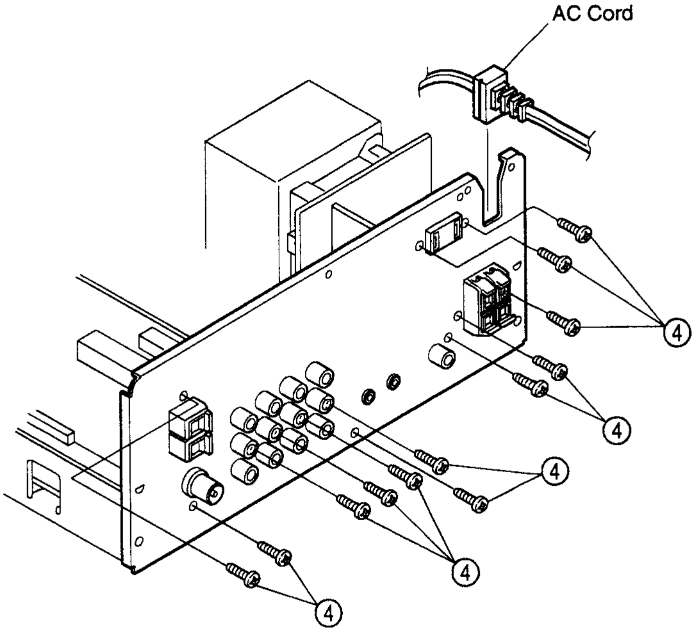


TUNER AMP SECTION

3. Rear Plate

(1) Take off the AC Cord from the Rear Plate.

(2) Remove 12 screws ④ from the Rear Plate.


AC Cord
④
④
④
④
④

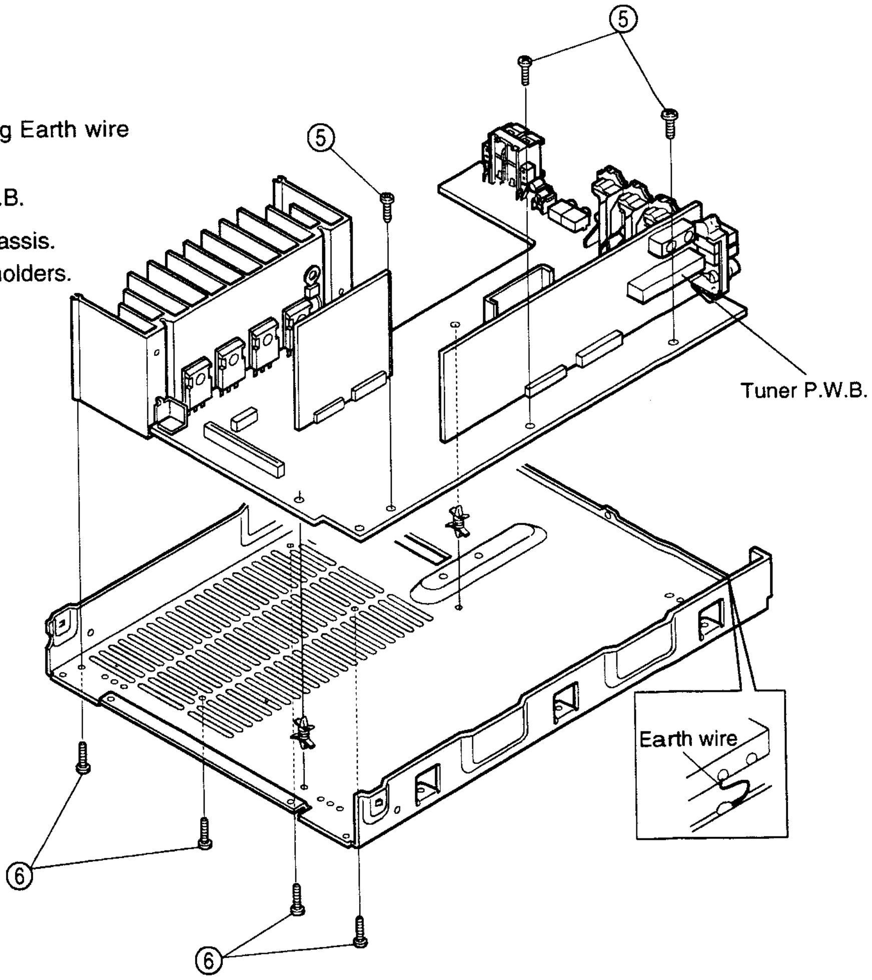
4. Main P.W.B.

(1) Remove Tuner P.W.B.after disconnecting Earth wire from its tuner pack.

(2) Remove 3 screws ⑤ fixing the Main P.W.B.

(3) Remove 4 screws ⑥ on the bottom of chassis.

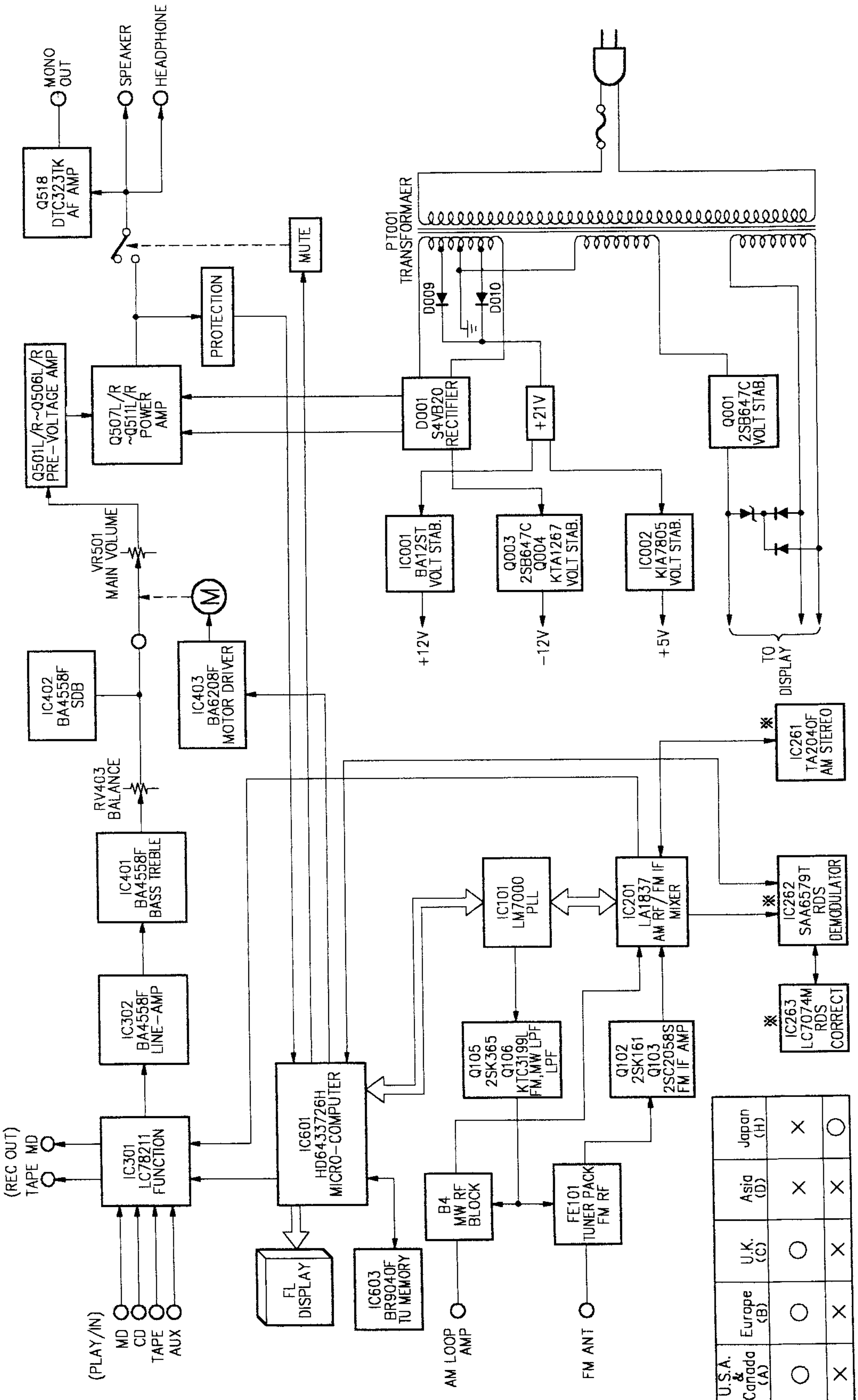
(4) Release the Main P.W.B. from 2 P.W.B. holders.


⑤
⑤
Tuner P.W.B.
Earth wire
⑥
⑥

BLOCK DIAGRAM

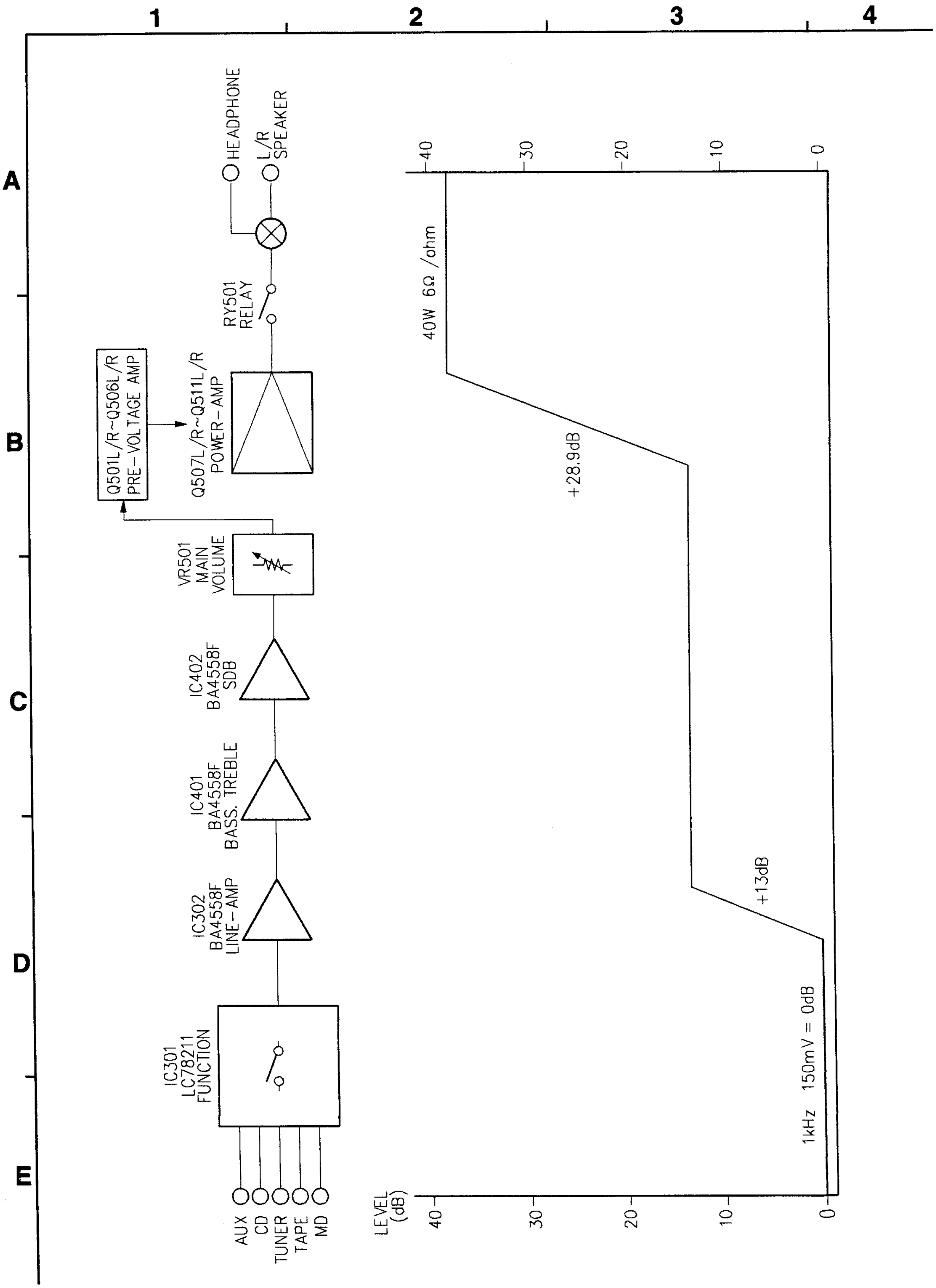
TUNER AMP SECTION

1
2
3
4
A
B
C
D
E


MONO OUT
SPEAKER
HEADPHONE
Q518 DTC323TK AF AMP
MUTE
PROTECTION
Q501L/R~Q506L/R PRE-VOLTAGE AMP
Q507L/R ~Q511L/R POWER AMP
PT001 TRANSFORMAER
D009
D010
D001 S4VB20 RECTIFIER
+21V
Q001 2SB647C VOLT STAB.
IC001 BA12ST VOLT STAB.
Q003 2SB647C Q004 KTA1267 VOLT STAB.
IC002 KIA7805 VOLT STAB.
+12V
−12V
+5V
TO DISPLAY
VR501 MAIN VOLUME
M
IC402 BA4558F SDB
IC403 BA6208F MOTOR DRIVER
RV403 BALANCE
IC401 BA4558F BASS TREBLE
IC302 BA4558F LINE-AMP
IC301 LC78211 FUNCTION
(REC OUT) TAPE MD
(PLAY/IN) MD CD TAPE AUX
IC601 HD6433726H MICRO-COMPUTER
FL DISPLAY
IC603 BR9040F TU MEMORY
IC261 TA2040F AM STEREO
※
IC101 LM7000 PLL
IC201 LA1837 AM RF/FM IF MIXER
IC262 SAA6579T RDS DEMODULATOR
IC263 LC7074M RDS CORRECT
Q105 2SK365 Q106 KTC3199L FM,MW LPF LPF
Q102 2SK161 Q103 2SC2058S FM IF AMP
B4 MW RF BLOCK
FE101 TUNER PACK FM RF
AM LOOP AMP
FM ANT

DEST. / SYBL NO.	U.S.A. & Canada (A)	Europe (B)	U.K. (C)	Asia (D)	Japan (H)
IC262 IC263	○	○	○	×	×
IC261	×	×	×	×	○

LEVEL DIAGRAM

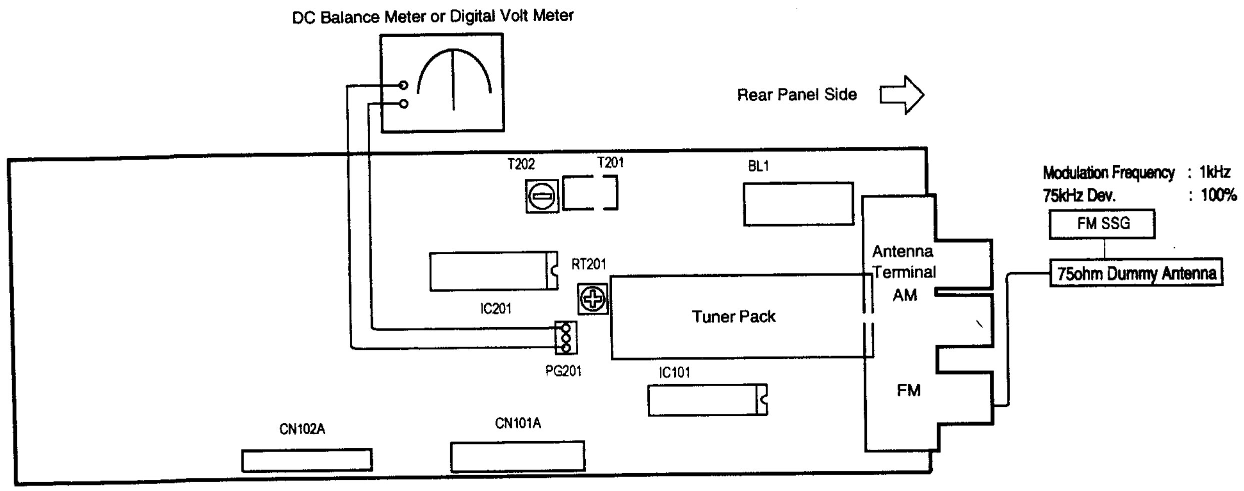

1
2
3
4
A
B
C
D
E
AUX
CD
TUNER
TAPE
MD
IC301
LC78211
FUNCTION
IC302
BA4558F
LINE-AMP
IC401
BA4558F
BASS. TREBLE
IC402
BA4558F
SDB
VR501
MAIN
VOLUME
Q501L/R~Q506L/R
PRE-VOLTAGE AMP
Q507L/R~Q511L/R
POWER-AMP
RY501
RELAY
HEADPHONE
L/R
SPEAKER
LEVEL
(dB)
40
30
20
10
0
1kHz 150mV = 0dB
+13dB
+28.9dB
40W 6Ω /ohm

1. ADJUSTMENT

TUNER ALIGNMENT(BAND BUTTON : FM, MONO/AUTO BUTTON : AUTO)

Step	Alignment Item	Tuning Frequency Setting	Input					Output		Adjustment		Remarks
			Instrument	Frequency	Input level	Modulation	Connection	Type	Connect to	Points	Adjust to	
1	FM DC BALANCE	98.3 MHz	FM S.G.	98.3 MHz	60 dBμ	1kHz 75kHz DEV.	FM Antenna Terminal	DC Balance Meter or Digital Volt Meter	⊕PG201 ⊖PG201	T202	0±30mV	Monaural Modulation
2	MUTING LEVEL	98.3 MHz	FM S.G.	98.3 MHz	22 dBμ	1kHz 75kHz DEV.	FM Antenna Terminal	TUNED Lighting Check	SPEAKERS Terminal or TAPE OUT Terminal	RT201	Input Level 22dBμ±4dB	Output signal appearing level

CONNECTION / ALIGNMENT POINTS (Component Side)


DC Balance Meter or Digital Volt Meter
Rear Panel Side
T202
T201
BL1
RT201
IC201
Tuner Pack
PG201
IC101
CN102A
CN101A
Antenna Terminal
AM
FM
Modulation Frequency : 1kHz
75kHz Dev. : 100%
FM SSG
75ohm Dummy Antenna

TUNER P.W.B.

2. Idling current adjust

(1) Set controls as follows:

POWER Switch	OFF (Standby)
Volume Control	0 (Min)
Function	AUX
Speakers	Open
Temperature	15°C~30°C (59°F~86°F)
VR502L/R	Max (CW)

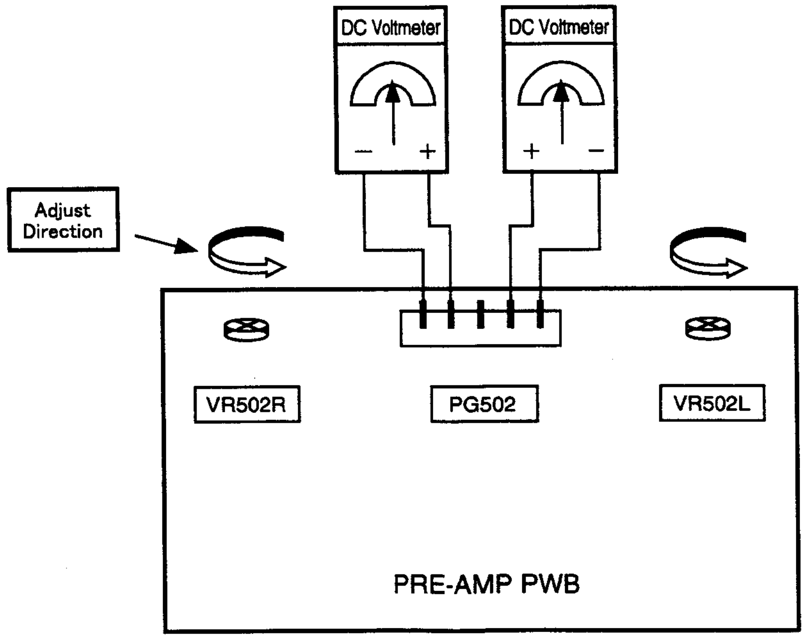
(2) Connect DC Voltmeter to PG502

(3) Turn the power switch on and rotate the VR502L/R CCW so that the DC Voltmeter reads 2~2.5mV DC at the PG502 before set heat up.

Remarks:

* If power transistor spoiled, in this case need to change **(Q508L, Q509L, Q510L, Q511L)** or **(Q508R, Q509R, Q510R, Q511R)** at the same time

* Use rated power supply voltage (mentioned in Specifications when adjusting the idling current.)

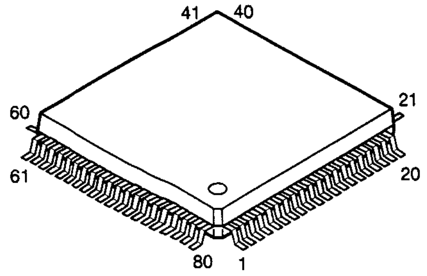

DC Voltmeter
DC Voltmeter
− +
+ −
Adjust Direction
VR502R
PG502
VR502L
PRE-AMP PWB

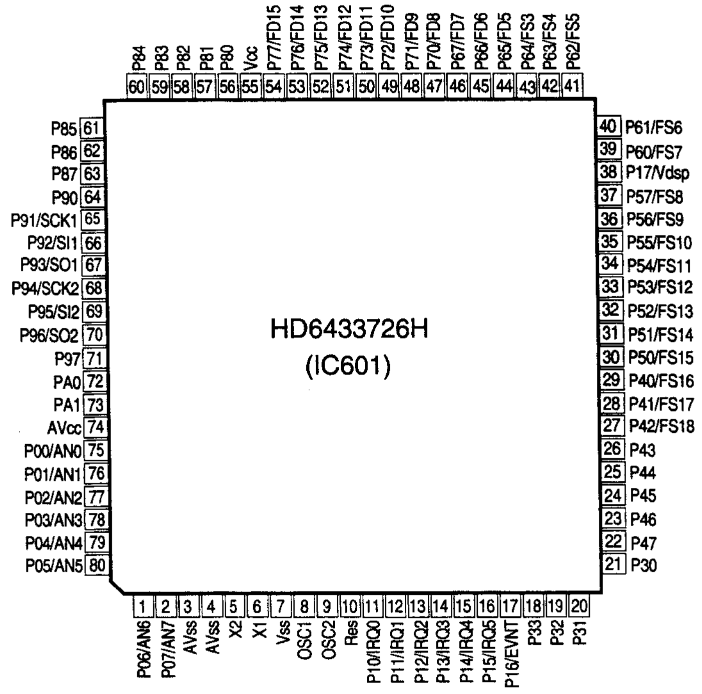
TUNER AMP SECTION

SEMICONDUCTORS

● µCOM

HD6433726H (IC601)


41
40
60
21
61
20
80
1


HD6433726H
(IC601)
60 P84
59 P83
58 P82
57 P81
56 P80
55 Vcc
54 P77/FD15
53 P76/FD14
52 P75/FD13
51 P74/FD12
50 P73/FD11
49 P72/FD10
48 P71/FD9
47 P70/FD8
46 P67/FD7
45 P66/FD6
44 P65/FD5
43 P64/FS3
42 P63/FS4
41 P62/FS5
P85 61
P86 62
P87 63
P90 64
P91/SCK1 65
P92/SI1 66
P93/SO1 67
P94/SCK2 68
P95/SI2 69
P96/SO2 70
P97 71
PA0 72
PA1 73
AVcc 74
P00/AN0 75
P01/AN1 76
P02/AN2 77
P03/AN3 78
P04/AN4 79
P05/AN5 80
40 P61/FS6
39 P60/FS7
38 P17/Vdsp
37 P57/FS8
36 P56/FS9
35 P55/FS10
34 P54/FS11
33 P53/FS12
32 P52/FS13
31 P51/FS14
30 P50/FS15
29 P40/FS16
28 P41/FS17
27 P42/FS18
26 P43
25 P44
24 P45
23 P46
22 P47
21 P30
1 P06/AN6
2 P07/AN7
3 AVss
4 AVss
5 X2
6 X1
7 Vss
8 OSC1
9 OSC2
10 Res
11 P10/IRQ0
12 P11/IRQ1
13 P12/IRQ2
14 P13/IRQ3
15 P14/IRQ4
16 P15/IRQ5
17 P16/EVNT
18 P33
19 P32
20 P31

The functions of this microcomputer are made up of the following four pillars.

a. Tuner functions

These functions perform the required control for the reception of FM and AM broadcasts.

b. Auto functions

Positioned at the heart of the system stereo, the auto functions perform serial communications with other components to provide overall control.

These functions decode the signals from the remote control and send them to each component of the system.

c. Timer functions

Counts the clock of the 24-hour display.

These functions perform two types of timer operations, "everyday and sleep."

d. Display Function

Outputs the control signal of the FLD.

NOTE1 When buttons "STANDBY" and "MEMORY" are pressed simutaneously and the power cord is inserted into the power outlet , the frequencies used for the tracking adjustment will automatically be registerd in the preset memory as indicated below.

Use this information for tuning and other procedures.

	P1	P2	P3	P4	P5
AM (kHz)	520	600	1000	1400	1710
	P11	P12	P13	P14	P15
FM (MHz)	87.5	89.0	98.0	100.1	108.0

* P6 through P10 and P21 through P40 are AM 520 kHz, and P16 through P20 are FM 87.5 MHz.

NOTE2 Depressing both the MEORY and BAND buttons while plugging the power cord into the power outlet serves to initialize the current time setting and the contents of the timer and preset memory.

2. Receiving Band Table

Band	Receiving frequency	Local oscillator frequency	IF	Frequency division ratio	Comparison frequency	Step frequency	Other
FM	87.5 ~ 108.0MHz	98.2 ~ 118.7MHz	10.7MHz	1	25kHz	100kHz	STEREO
AM	520 ~ 1710kHz	970 ~ 2160kHz	450kHz	—	10kHz	10kHz	

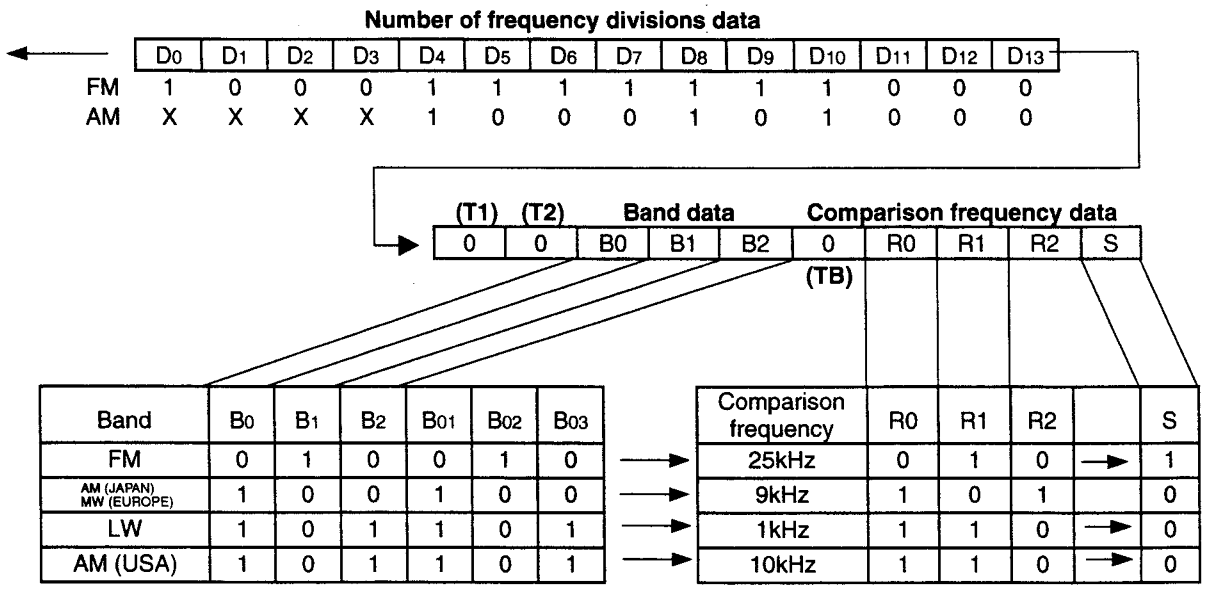
3. Signals sent to the LM7000 Programmable Divider

a. Signals to the programmable divider are sent from 3 sources: CE OUT, CLOCK OUT, and DATA OUT.

b. The programmable divider takes in DATA at CLOCK ↗ , when CE equals 1.

c. The data is a 24-bit serial signal which is taken in to the programmable divider from the LSB.
(At the AM setting, D_0 through D_3 are ignored, so that D_4 becomes the LSB.)

d. The data is made up of the number of frequency divisions data, the band data, and the comparison frequency data.
(See diagram below.)


Number of frequency divisions data
(T1)
(T2)
Band data
Comparison frequency data
(TB)

Number of frequency divisions data

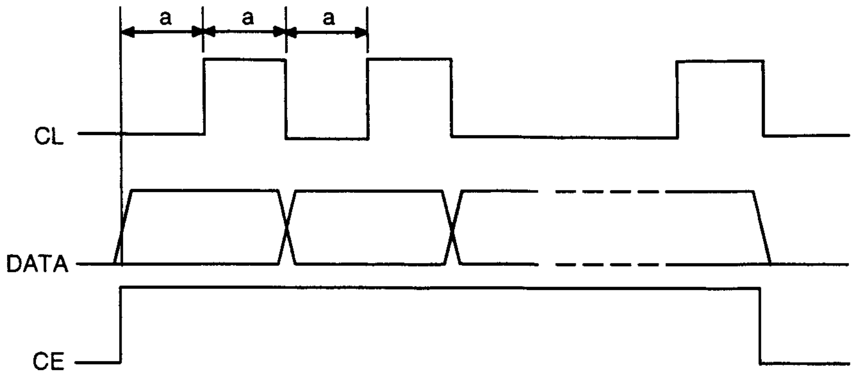
	D0	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13
FM	1	0	0	0	1	1	1	1	1	1	1	0	0	0
AM	X	X	X	X	1	0	0	0	1	0	1	0	0	0

(T1)	(T2)	Band data			Comparison frequency data				
0	0	B0	B1	B2	0 (TB)	R0	R1	R2	S

Band	B_0	B_1	B_2	B_{01}	B_{02}	B_{03}
FM	0	1	0	0	1	0
AM (JAPAN) MW (EUROPE)	1	0	0	1	0	0
LW	1	0	1	1	0	1
AM (USA)	1	0	1	1	0	1

Comparison frequency	R0	R1	R2		S
25kHz	0	1	0	→	1
9kHz	1	0	1		0
1kHz	1	1	0	→	0
10kHz	1	1	0	→	0

e. Timing for sending
a = 2.5 µsec


a
a
a
CL
DATA
CE

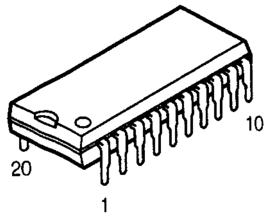
HD6433726H Terminal Function

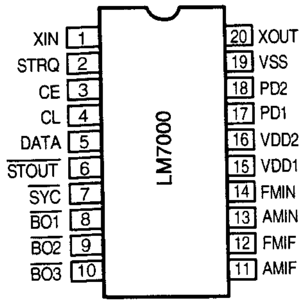
Pin No.	Symbol	Port Name	I/O	INI	ACT	Function
1	AM Stereo	P06/AN6	I	–	L	AM stereo signal detection.
2	Tuned In	P07/AN7	I	L	H	– FM/AM tuning signal input.
3	GND	AVss	–	–	–	Analog ground.
4	GND	Test	–	–	–	
5	Sub Xtal	X2	O	–	–	Sub Xtal drive.
6	Sub Xtal	X1	I	–	–	Sub Xtal input.
7	Vss	Vss	–	–	–	Ground.
8	OSC1	OSC1	O	–	–	8.38 MHz Xtal out.
9	OSC2	OSC2	I	–	–	8.38 MHz Xtal in.
10	Reset	Res	I	–	L	Reset input.
11	Remocon	P10/IRQ0	I	–	L	Remote control signal in.
12	50/60	P11/IRQ1	I	–	L	50/60 Hz AC input.
13	Protect	P12/IRQ2	I	–	L	Overcurrent detection signal input.
14	RDS Start	P13/IRQ3	I	–	L	RDS signal start detection.
15	RXD	P14/IRQ4	I	–	L	Denon Bus data input.
16	Mute	P15/IRQ5	O	H	L	Speaker relay off.
17	GND	P16/EVNT	I	–	–	Not used.
18	N.C.	P33	O	L	L	No connection.
19	RT Gr LED	P32	O	L	H	RT green LED.
20	TA Gr LED	P31	O	L	H	TA green LED.
21	PTY Gr LED	P30	O	L	H	PTY green LED.
22	RT Rd LED	P47	O	L	H	RT red LED.
23	TA Rd LED	P46	O	L	H	TA red LED.
24	RTY Rd LED	P45	O	L	H	PTY red LED.
25	Diode 1	P44	I	–	H	Setting return input 1.
26	Diode 2	P43	I	–	H	Setting return input 2.
27	Seg 1	P42/FS18	O	L	H	Segment 16 output.
28	Seg 2	P41/FS17	O	L	H	Segment 15 output.
29	Seg 3	P40/FS16	O	L	H	Segment 14 output.
30	Seg 4	P50/FS15	O	L	H	Segment 13 output.
31	Seg 5	P51/FS14	O	L	H	Segment 12 output.
32	Seg 6	P52/FS13	O	L	H	Segment 11 output.
33	Seg 7	P53/FS12	O	L	H	Segment 10 output.
34	Seg 8	P54/FS11	O	L	H	Segment 9 output.
35	Seg 9	P55/FS10	O	L	H	Segment 8 output.
36	Seg 10	P56/FS9	O	L	H	Segment 7 output.
37	Seg 11	P57/FS8	O	L	H	Segment 6 output.
38	Vdisp	P17/Vdsp	–	–	–	High B voltage.
39	Seg 12	P60/FS7	O	L	H	Segment 5 output.
40	Seg 13	P61/FS6	O	L	H	Segment 4 output.
41	Seg 14	P62/FS5	O	L	H	Segment 3 output.
42	Seg 15	P63/FS4	O	L	H	Segment 2 output.
43	Seg 16	P64/FS3	O	L	H	Segment 1 output.
44	Dig 11	P65/FD5	O	L	H	Digit 11 output.
45	Dig 10	P66/FD6	O	L	H	Digit 10 output.
46	Dig 9	P67/FD7	O	L	H	Digit 9 output.
47	Dig 8	P70/FD8	O	L	H	Digit 8 output.
48	Dig 7	P71/FD9	O	L	H	Digit 7 output.
49	Dig 6	P72/FD10	O	L	H	Digit 6 output.
50	Dig 5	P73/FD11	O	L	H	Digit 5 output.
51	Dig 4	P74/FD12	O	L	H	Digit 4 output.
52	Dig 3	P75/FD13	O	L	H	Digit 3 output.
53	Dig 2	P76/FD14	O	L	H	Digit 2 output.
54	Dig 1	P77/FD15	O	L	H	Digit 1 output.
55	Vcc	Vcc	–	–	–	5V.
56	Volume Dwn	P80	O	H	H	Master volume down.
57	Volume Up	P81	O	H	H	Master volume up.
58	Power	P82	O	L	L	Amplifier circuit power on.
59	Tuner Mute	P83	O	H	L	Tuner audio mute.
60	Auto/Mono	P84	O	H	–	FM Auto/Mono setting.
61	Ant Sns	P85	O	L	H	Antenna sensitivity reduction.
62	SDB	P86	O	L	H	Super Dynamic Bass.
63	Sel EEROM	P87	O	L	H	Select SCI to EEROM.
64	PLL CE	P90	O	L	H	PLL serial data selection output.
65	Bus Clock	P91/SCK1	O	H	–	Denon Bus clock.
66	Bus Data In	P92/SI1	I	–	–	Denon Bus data input.
67	Bus Data Out	P93/SO1	O	H	–	Denon Bus data output.
68	RDS Clock	P94/SCK2	O	H	–	RDS data fetch clock input, PLL control clock output, LC7821 clock output.
69	RDS Data	P95/SI2	I	H	–	RDS serial data input.
70	PLL Data	P96/SO2	O	H	–	PLL serial data output, LC7821 serial data output.
71	RDS Res	P97	O	H	L	LC7070 reset output.
72	PLL STRQ	PA0	O	L	H	IF count operation request output.
73	LC7821CE	PA1	O	L	H	LC7821 chip enable.
74	AVcc	AVcc	–	–	–	Analog 5 V power supply.
75	Key AD0	P00/AN0	I	–	–	Analog key input 1.
76	Key AD1	P01/AN1	I	–	–	Analog key input 1.
77	PWB Test	P02/AN2	I	–	–	Board check at 5 V.
78	Stereo In	P03/AN3	I	–	L	FM stereo demodulation detection.
79	Signal In	P04/AN4	I	–	L	RF signal detection signal input.
80	Stop In	P05/AN5	I	–	L	IF count tuning detection.

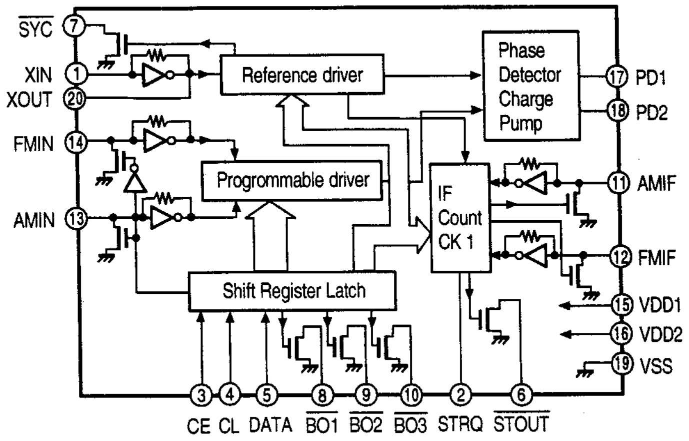
TUNER AMP SECTION

● IC's

LM7000 (IC101)



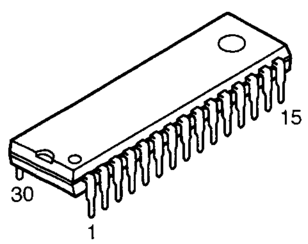

XIN 1
STRQ 2
CE 3
CL 4
DATA 5
STOUT 6
SYC 7
BO1 8
BO2 9
BO3 10
LM7000
20 XOUT
19 VSS
18 PD2
17 PD1
16 VDD2
15 VDD1
14 FMIN
13 AMIN
12 FMIF
11 AMIF

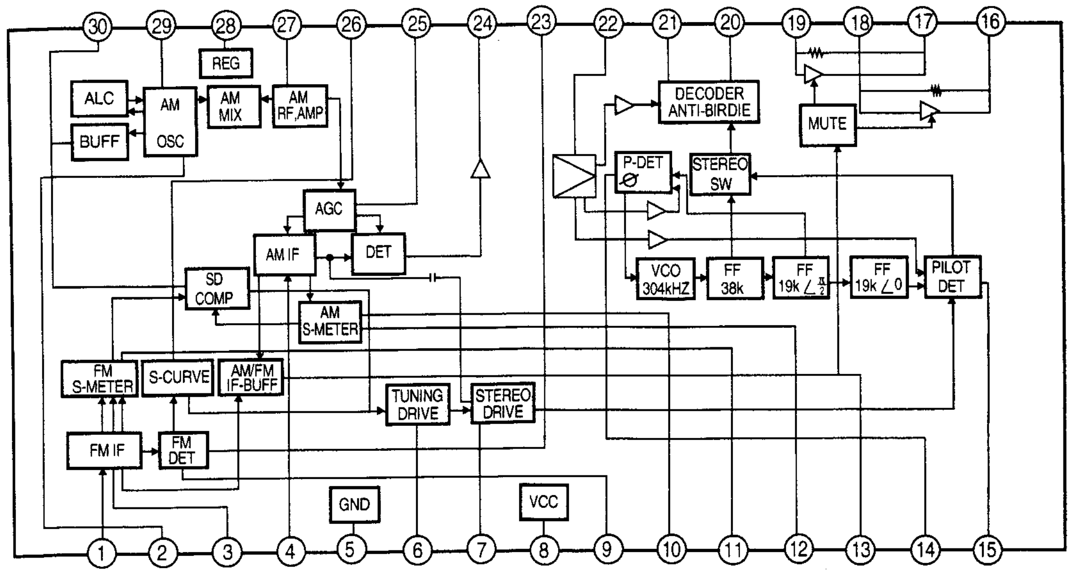

SYC 7
XIN 1
XOUT 20
FMIN 14
AMIN 13
Reference driver
Phase Detector Charge Pump
17 PD1
18 PD2
Programmable driver
IF Count CK 1
11 AMIF
12 FMIF
Shift Register Latch
15 VDD1
16 VDD2
19 VSS
3 4 5 8 9 10 2 6
CE CL DATA BO1 BO2 BO3 STRQ STOUT

Pin Description

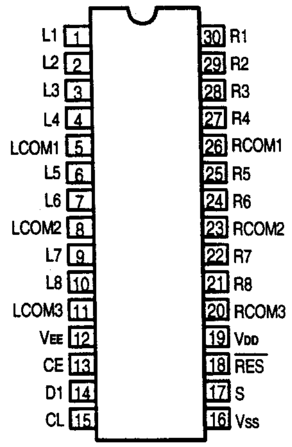
SYC : Clock (400kHz) for the controller
XIN, XOUT : X'tal oscillator (7.2MHz) with built-in feedback resistor
FM IN, AM IN : Local osc. signal input
CE, CL, DATA : Data input
B01, B02, B03 : Band data output. B01 can be set as the time base output (8Hz)
STRQ : IF counter request input
STOUT : Auto research stop signal output
VDD1, VDD2, VSS : Power supply (VDD2 is a back-up power supply)
AMIF, FMIF : IF signal input
PD1, PD2 : Charge pump output

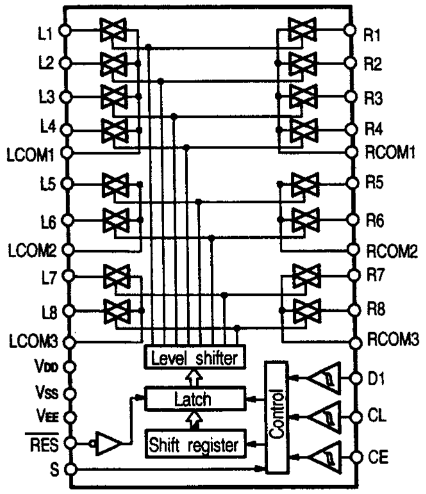
LA1837 (IC201)



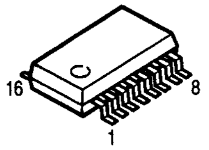

30 29 28 27 26 25 24 23 22 21 20 19 18 17 16
REG
ALC
AM
AM MIX
AM RF.AMP
BUFF
OSC
DECODER ANTI-BIRDIE
MUTE
P-DET
STEREO SW
AGC
AM IF
DET
SD COMP
AM S-METER
VCO 304kHZ
FF 38k
FF 19k
FF 19k ∠0
PILOT DET
FM S-METER
S-CURVE
AM/FM IF-BUFF
TUNING DRIVE
STEREO DRIVE
FM IF
FM DET
GND
VCC
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

LC78211 (IC301)


L1 1
L2 2
L3 3
L4 4
LCOM1 5
L5 6
L6 7
LCOM2 8
L7 9
L8 10
LCOM3 11
VEE 12
CE 13
D1 14
CL 15
30 R1
29 R2
28 R3
27 R4
26 RCOM1
25 R5
24 R6
23 RCOM2
22 R7
21 R8
20 RCOM3
19 VDD
18 RES
17 S
16 Vss

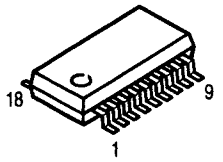

L1
L2
L3
L4
LCOM1
L5
L6
LCOM2
L7
L8
LCOM3
VDD
Vss
VEE
RES
S
R1
R2
R3
R4
RCOM1
R5
R6
RCOM2
R7
R8
RCOM3
D1
CL
CE
Level shifter
Latch
Shift register
Control

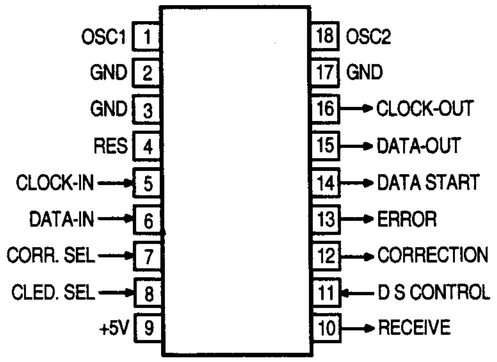
SAA6579T (IC262)



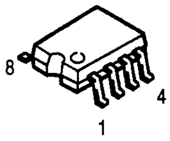
Pin No.	Symbol	Description
1	QUAL	Quality indication output.
2	RDDA	RDS data output.
3	Vref	Reference voltage output (0.5 VDDA).
4	MUX	Multiplex signal input.
5	VDDA	+5V supply voltage for analog part.
6	VssA	Ground for analog part (0V).
7	CIN	Subcarrier input to comparator.
8	SCOUT	Subcarrier output of reconstruction filter.
9	TSTLD	Test control.
10	TEST	Test enable.
11	VssD	Ground for digital part (0V).
12	VDDD	+5V supply voltage for digital part.
13	OSCI	Oscillator input.
14	OSCO	Oscillator output.
15	T57	57 kHz clock signal output.
16	RDCL	RDS clock output.

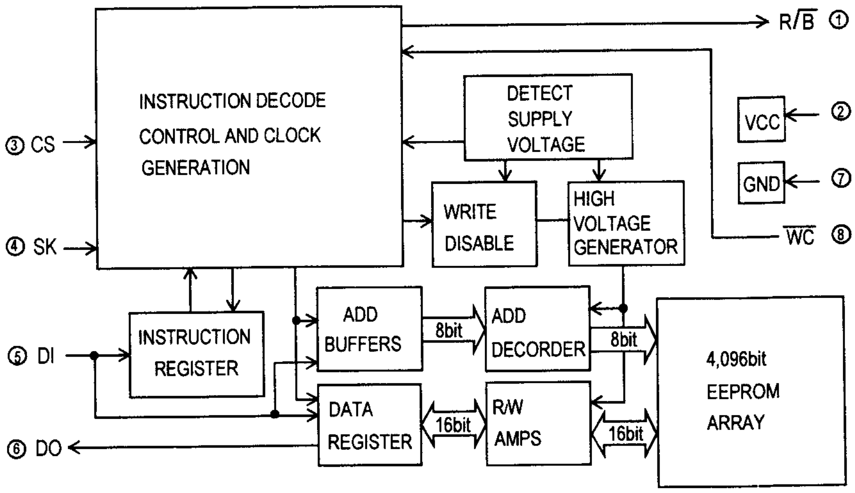
LC7074M (IC263)



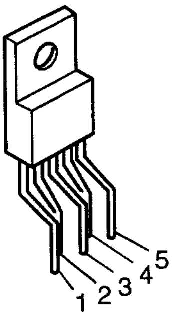

OSC1 1
GND 2
GND 3
RES 4
CLOCK-IN 5
DATA-IN 6
CORR. SEL 7
CLED. SEL 8
+5V 9
18 OSC2
17 GND
16 CLOCK-OUT
15 DATA-OUT
14 DATA START
13 ERROR
12 CORRECTION
11 D S CONTROL
10 RECEIVE

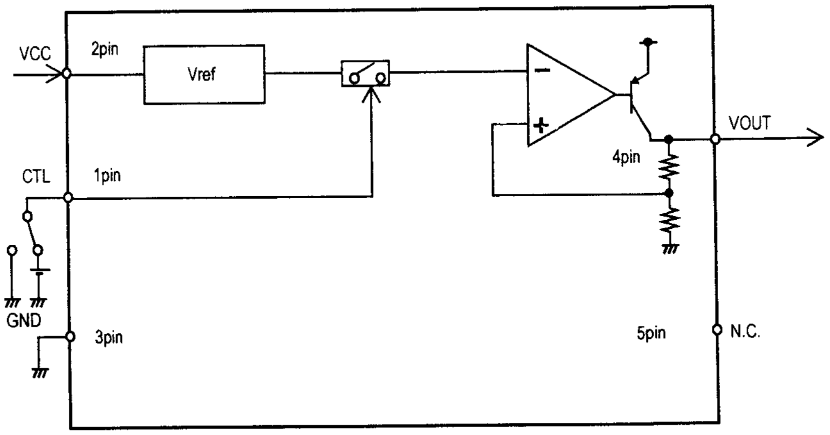
BR9040F (IC603)



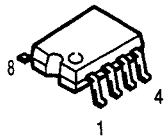

R/B̄ ①
VCC ②
GND ⑦
W̄C̄ ⑧
③ CS
④ SK
⑤ DI
⑥ DO
INSTRUCTION DECODE
CONTROL AND CLOCK
GENERATION
DETECT SUPPLY VOLTAGE
WRITE DISABLE
HIGH VOLTAGE GENERATOR
INSTRUCTION REGISTER
ADD BUFFERS
8bit
ADD DECORDER
8bit
4,096bit EEPROM ARRAY
DATA REGISTER
16bit
R/W AMPS
16bit

BA12ST (IC001)



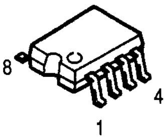

VCC
2pin
Vref
CTL
1pin
GND
3pin
4pin
VOUT
5pin
N.C.

BA6208F (IC403)



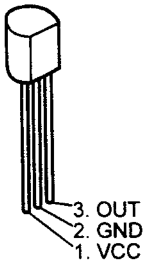
1: VCC
2: BOUT
3: GND
4: AOUT
5: BIN
6: VCT
7: GND
8: AIN

BA4558F (IC302, 401, 402)

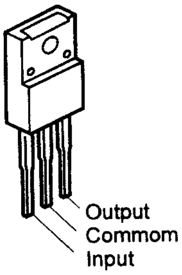


1: AOUT
2: AIN1
3: AIN2
4: VEE
5: BIN2
6: BIN1
7: BOUT
8: VCC

KIA7045P (IC602)


3. OUT
2. GND
1. VCC

KIA7805 (IC002)


Output
Commom
Input

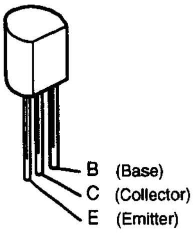
●IC PROTECTOR

ICP-N5 (PR001,002,003,201)

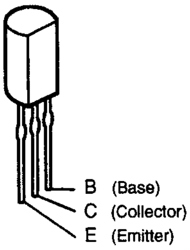
TUNER AMP SECTION

●TRANSISTOR

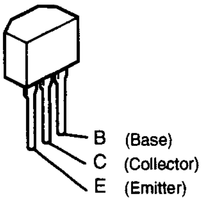
HIT8050C
2SA970
2SA988
2SC1740
2SC1815
2SC1841


B (Base)
C (Collector)
E (Emitter)

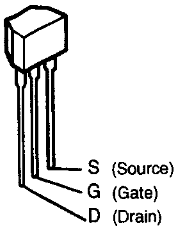
2SB647
2SD667A


B (Base)
C (Collector)
E (Emitter)

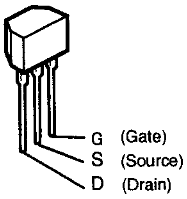
2SC2058S
KTC3199
KTC3199L
KTA1267


B (Base)
C (Collector)
E (Emitter)

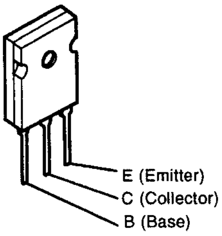
2SK365


S (Source)
G (Gate)
D (Drain)

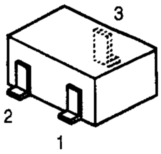
2SK161


G (Gate)
S (Source)
D (Drain)

2SA1633
2SC4278

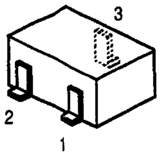

E (Emitter)
C (Collector)
B (Base)

2SA1037AK
2SC2412K



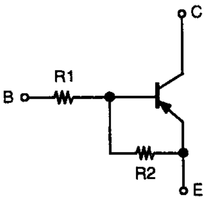
1: E (Emitter)
2: B (Base)
3: C (Collector)

DTA114EK
DTC114EK
DTC143EK
DTA144EK
DTC144EK
DTC323TK



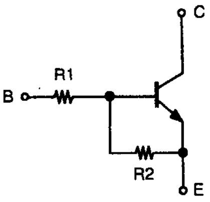
1: E (Emitter)
2: B (Base)
3: C (Collector)

PNP Type



	R1	R2
DTA114EK	10 kohm	10 kohm
DTA144EK	47 kohm	47 kohm

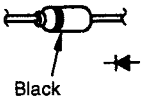
NPN Type



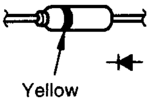
	R1	R2
DTC114EK	10 kohm	10 kohm
DTC143EK	4.7 kohm	4.7 kohm
DTC144EK	47 kohm	47 kohm
DTC323TK	2.2 kohm	–

●DIODE

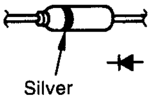
1N4531
1S2471



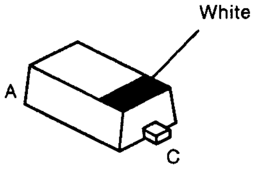
1SS133



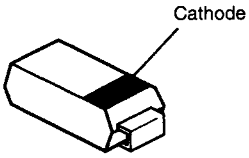
1N4002



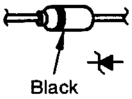
1SS355



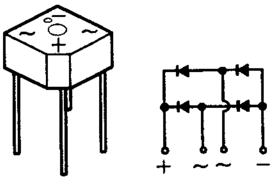
RB160L-40
S1B



MTZ-J12C
MTZ-J5.6A
MTZ-J27A
MTZ-J6.2A
MTZ-J10A

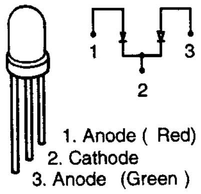


S4VB20

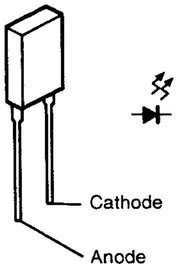


●LED

SPR-505MVW

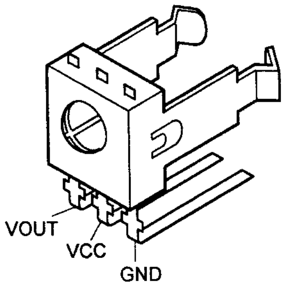

1
3
2
1. Anode (Red)
2. Cathode
3. Anode (Green)

LH5230/P1 (Red)


Cathode
Anode

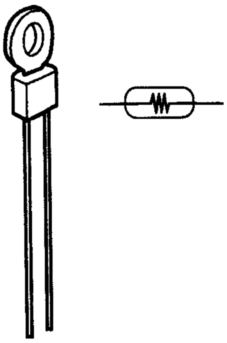
●IR SENSOR

28043TH2


VOUT
VCC
GND

● POSISTOR

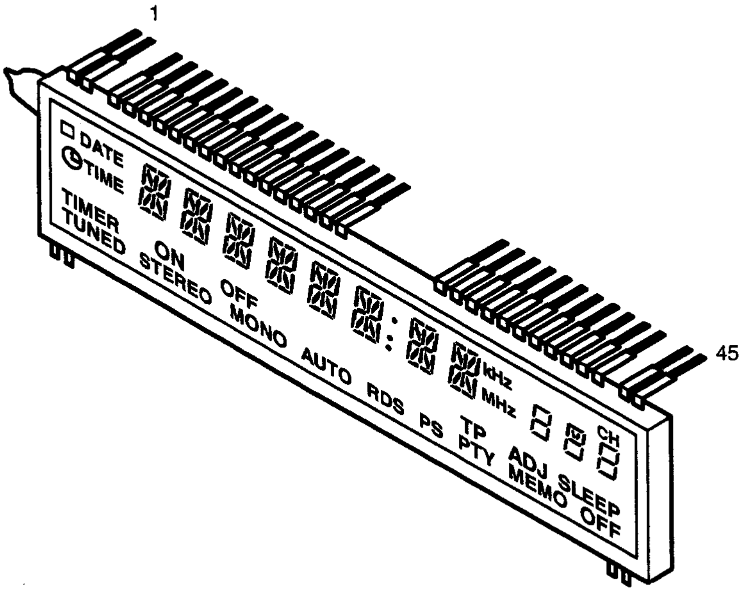
PTH9M04BC222TS2F333



TUNER AMP SECTION

● FL DISPLAY 11-BT-159GK

(Parts No. : 9LDD00061)


1
45
DATE
TIME
TIMER
TUNED
ON
STEREO
OFF
MONO
AUTO
RDS
PS
TP
PTY
kHz
MHz
CH
ADJ
MEMO
SLEEP
OFF

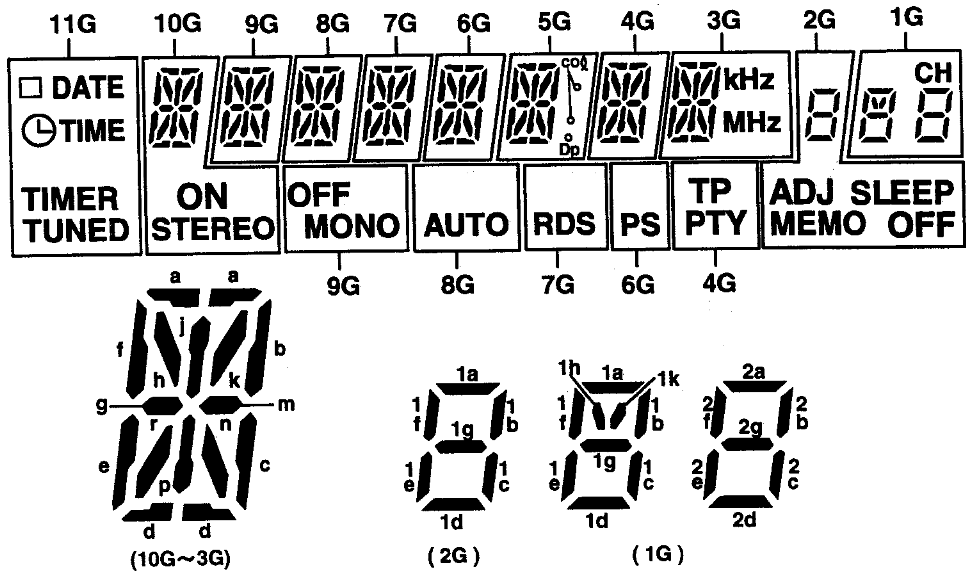
Pin Connection

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Connection	F1	F1	NP	NP	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16	NX	NX	NX	NX

Pin No.	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Connection	NX	NX	NX	NX	NX	NX	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G	NP	NP	F2	F2

NOTE
1) F1,F2 .... Filament
2) NP.................. No Pin
3) NX.................. No Extension Pin
4) DL .... Datum Line
5) 1G~11G........... Grid
6) Visible Angle (Min) = 33° (Upper), 25° (Lower)

Grid Partition


11G
10G
9G
8G
7G
6G
5G
4G
3G
2G
1G
□ DATE
TIME
TIMER
TUNED
ON
STEREO
OFF
MONO
AUTO
RDS
PS
TP
PTY
ADJ SLEEP
MEMO OFF
coℓ
Dp
kHz
MHz
CH
9G
8G
7G
6G
4G
a a
f j b
h k
g r n m
e p c
d d
(10G~3G)
1a
1f 1g 1b
1e 1c
1d
(2G)
1h 1a 1k
1f 1b
1g
1e 1c
1d
(1G)
2a
2f 2g 2b
2e 2c
2d

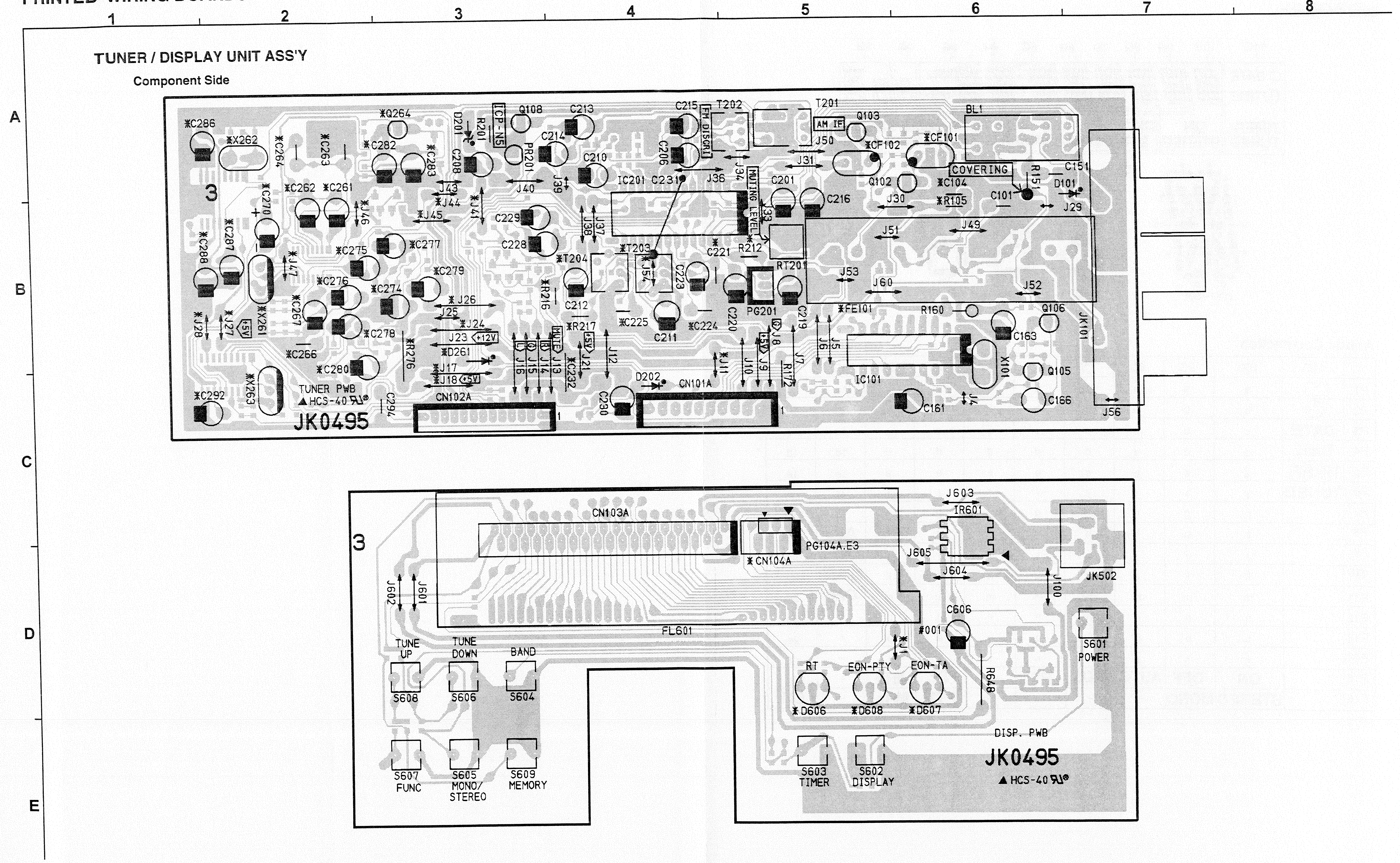
Anode Connection

	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	□	a	a	a	a	a	a	a	a	1a	1a
P2	◷	b	b	b	b	b	b	b	b	1b	1b
P3	**DATE**	c	c	c	c	c	c	c	c	1c	1c
P4	**TIME**	d	d	d	d	d	d	d	d	1d	1d
P5	**TIMER**	e	e	e	e	e	e	e	e	1e	1e
P6	**TUNED**	f	f	f	f	f	f	f	f	1f	1f
P7	–	g	g	g	g	g	g	g	g	1g	1g
P8	–	h	h	h	h	h	h	h	h	**ADJ**	1h,1k
P9	–	j	j	j	j	j	j	j	j	**MEMO**	2a
p10	–	k	k	k	k	k	k	k	k	**SLEEP**	2b
P11	–	m	m	m	m	m	m	m	m	**OFF**	2c
P12	–	n	n	n	n	n	n	n	n	–	2d
P13	–	p	p	p	p	p	p	p	p	–	2e
P14	–	r	r	r	r	r	r	r	r	–	2f
P15	–	**ON**	**OFF**	**AUTO**	**RDS**	**PS**	coℓ	**TP**	**kHz**	–	2g
P16	–	**STEREO**	**MONO**	–	–	–	Dp	**PTY**	**MHz**	–	**CH**

PRINTED WIRING BOARDS

TUNER / DISPLAY UNIT ASS'Y

Component Side


1
2
3
4
5
6
7
8
A
B
C
D
E
3
*C286
*X262
*C264
*C263
*Q264
*C282
*C283
D201
R201
ICP-N5
Q108
C208
PR201
C213
C214
C210
J39
J40
C215
C206
T202
FM DISCRI
J34
J36
IC201
C231
T201
AM IF
Q103
J50
J31
*CF102
*CF101
BL1
COVERING
R151
C151
D101
J29
C101
*C104
*R105
J30
Q102
C201
C216
MUTING LEVEL
J33
*C262
*C261
*C270
J46
J43
*J44
*J41
*J45
C229
C228
J38
J37
*C287
*C288
*C275
*C277
*T204
*T203
J54
*C221
R212
RT201
J51
J49
*J47
*C276
*C279
*C274
*R216
C223
J53
J60
J52
*J28
*J27
+5V
*X261
*C267
*J26
J25
C212
*C225
C211
*C224
C220
PG201
C219
*FE101
R160
Q106
JK101
*C266
*C278
*R276
*J24
J23
+12V
*D261
*R217
MUTE
J16
J15
J14
J13
J21
J12
J11
J10
J9
J8
J7
J6
J5
R172
C163
IC101
X101
*C280
*J17
*J18
+5V
*C232
D202
CN101A
Q105
*C292
*X263
TUNER PWB
▲HCS-40
C294
CN102A
C230
C161
J4
C166
J56
JK0495
CN103A
PG104A.E3
*CN104A
J603
IR601
J605
J604
JK502
J602
J601
J100
FL601
C606
#001
*J1
R648
S601
POWER
TUNE UP
S608
TUNE DOWN
S606
BAND
S604
RT
*D606
EON-PTY
*D608
EON-TA
*D607
S607
FUNC
S605
MONO/STEREO
S609
MEMORY
S603
TIMER
S602
DISPLAY
DISP. PWB
JK0495
▲HCS-40

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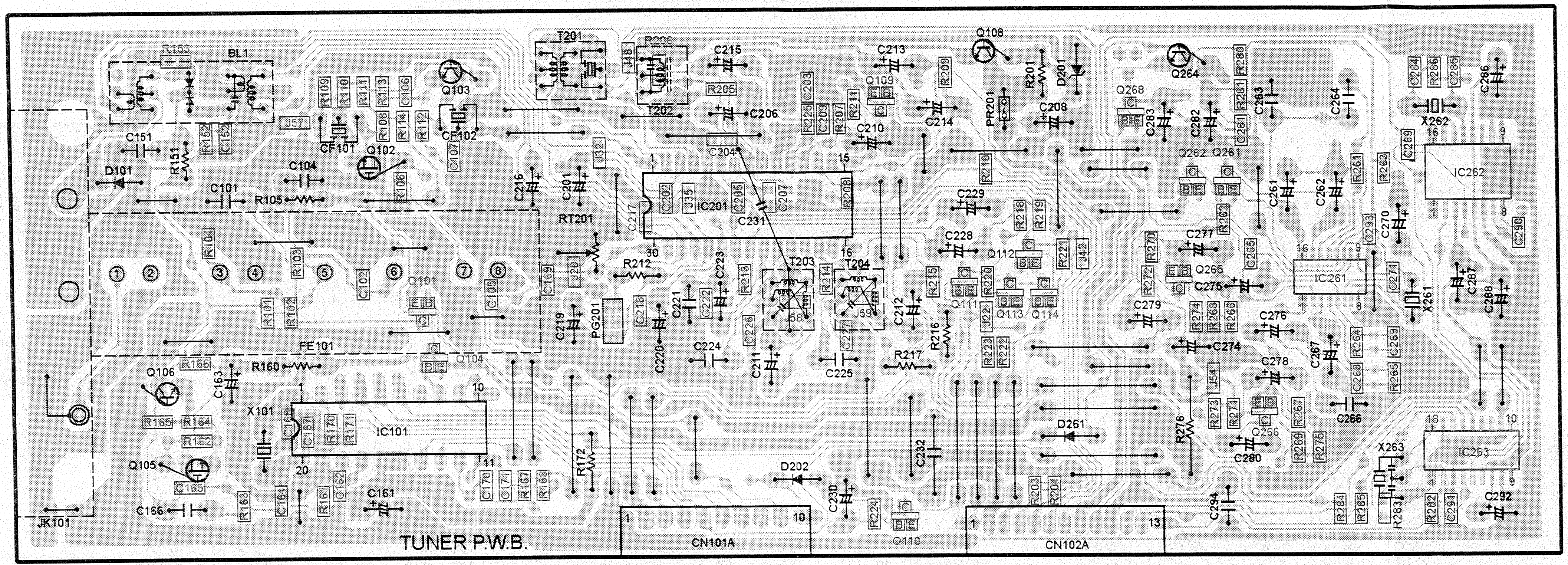
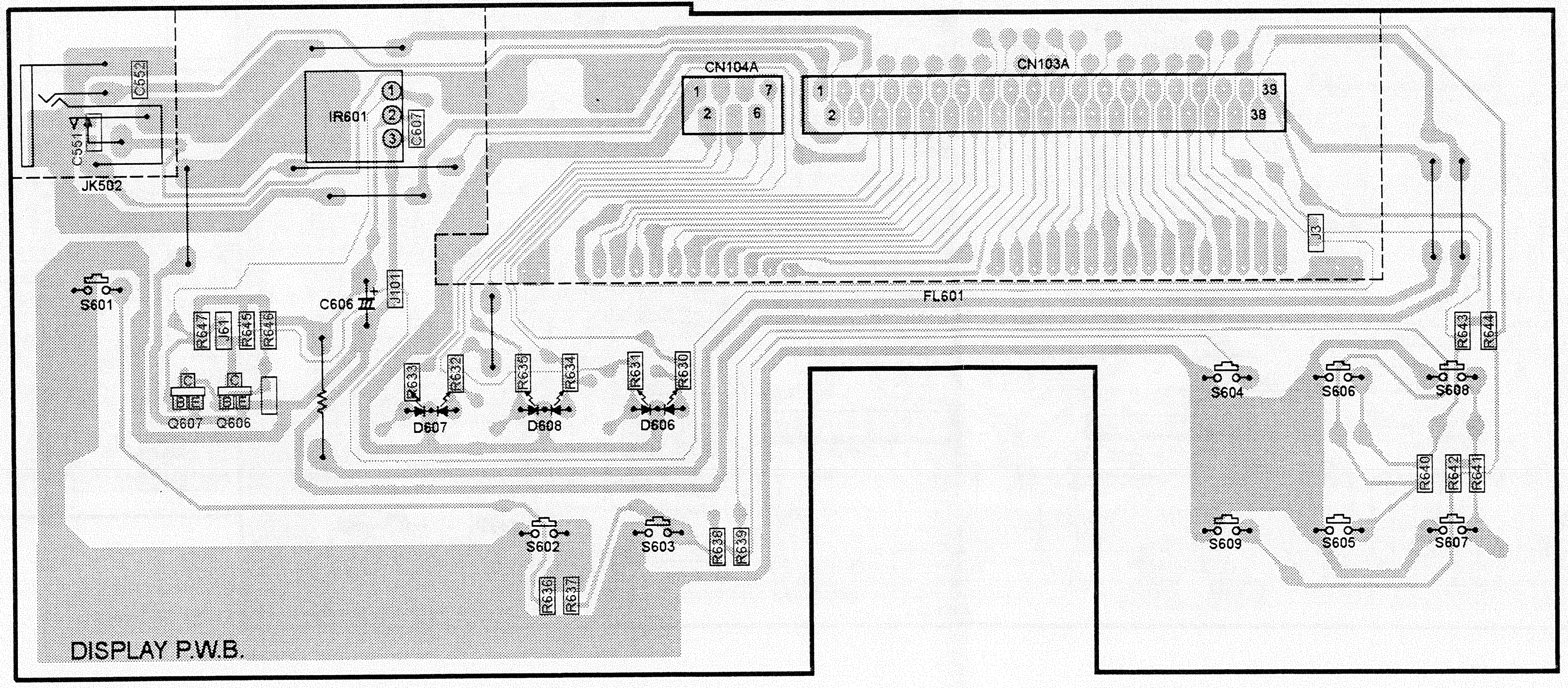
A
B
C
D
E

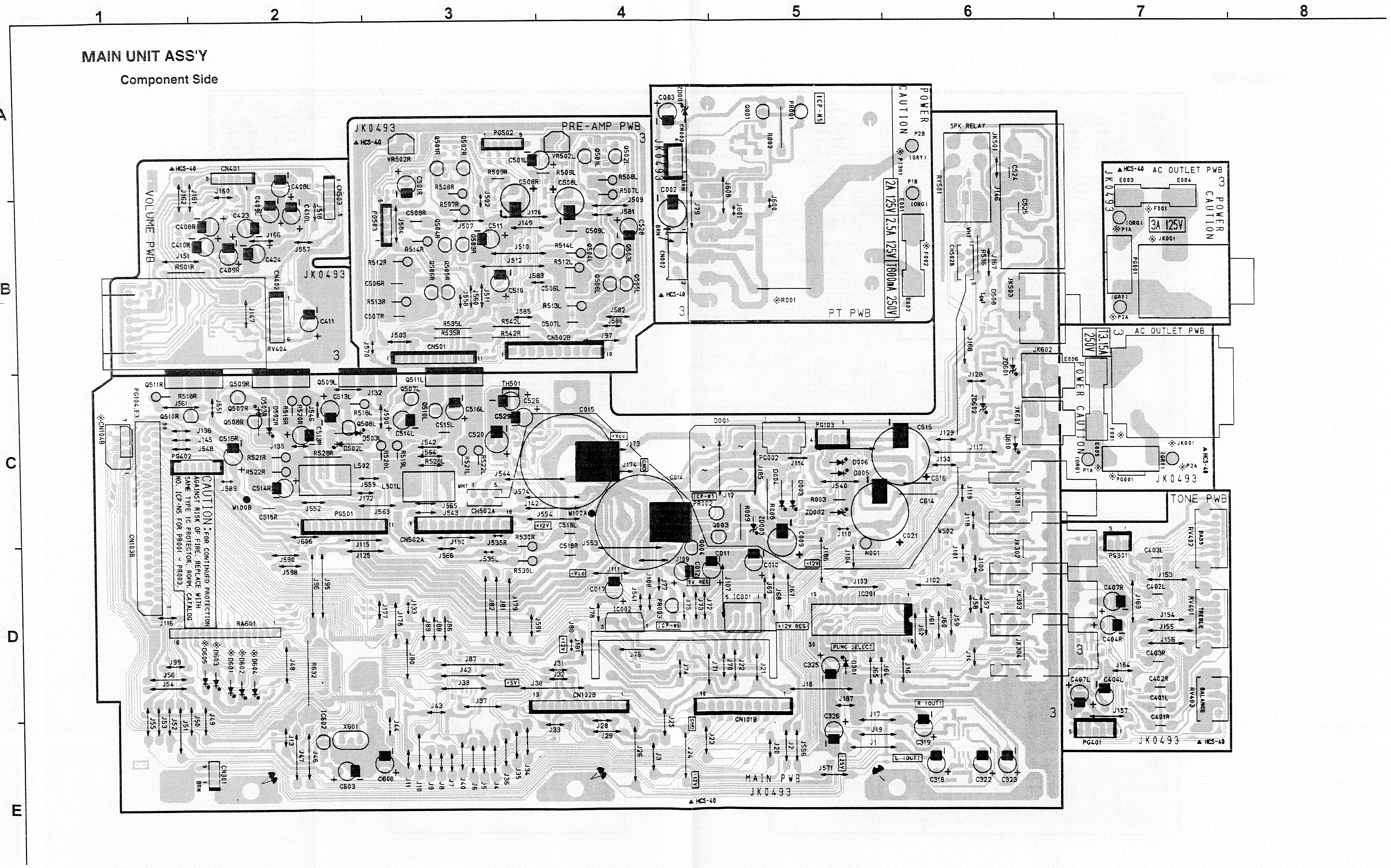
Pattern Side


TUNER P.W.B.
FE101
IC101
IC201
IC261
IC262
IC263
CN101A
CN102A
JK101
T201
T202
T203
T204
BL1
CF101
CF102
X101
X261
X262
X263
PG201
RT201
PR201


DISPLAY P.W.B.
CN104A
CN103A
IR601
JK502
FL601
S601
S602
S603
S604
S605
S606
S607
S608
S609
D606
D607
D608
Q606
Q607

MAIN UNIT ASS'Y

Component Side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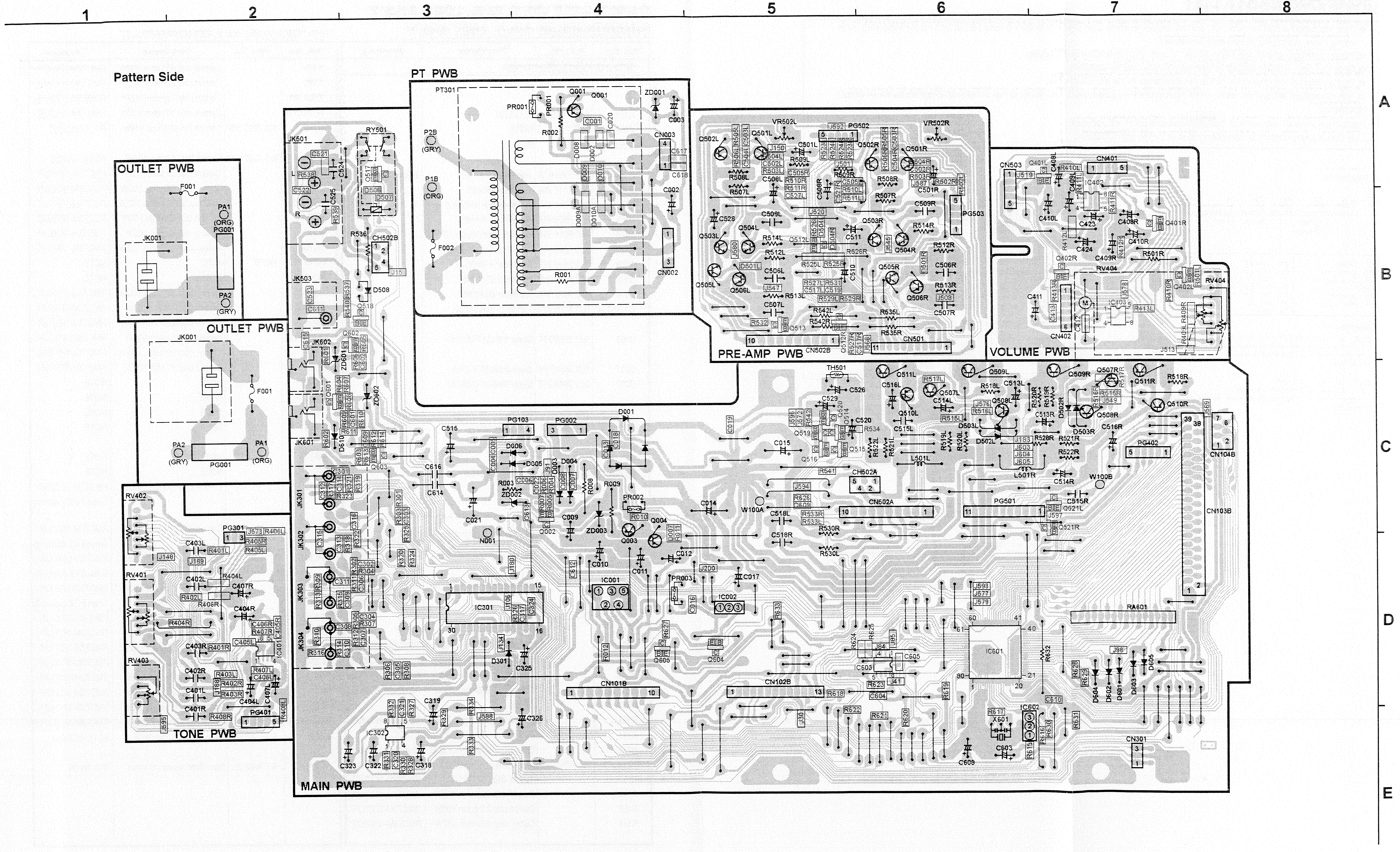
C
D
E
VOLUME PWB
PRE-AMP PWB
PT PWB
POWER CAUTION
2A 125V 2.5A 125V T800mA 250V
SPK RELAY
AC OUTLET PWB
3A 125V
T3.15A 250V
TONE PWB
BASS
TREBLE
BALANCE
MAIN PWB
JK0493
HCS-40
CAUTION; FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE WITH SAME TYPE IC PROTECTOR, ROHM, CATALOG NO. ICP-N5 FOR PR001 ~ PR003.
ICP-N5
FUNC SELECT
R (OUT)
L (OUT)
+12V REG
9V REG
CN401
CN501
CN502B
CN502A
CN101B
CN102B
CN301
CN103B
IC001
IC002
IC301
IC602
X601
RA601
PG402
PG501
PG502
PG503
PG301
PG401
PG001
PG002
PG103
TH501
D001

TUNER AMP SECTION

Pattern Side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A
B
C
D
E
PT PWB
OUTLET PWB
OUTLET PWB
PRE-AMP PWB
VOLUME PWB
TONE PWB
MAIN PWB
PT301
PR001
Q001
ZD001
C003
CN003
CN002
R001
R002
F001
F002
P2B
(GRY)
P1B
(ORG)
PA1
(ORG)
PA2
(GRY)
PG001
JK001
JK501
JK503
JK601
JK602
JK301
JK302
JK303
JK304
RY501
CH502B
VR502L
VR502R
PG502
PG503
Q501L
Q501R
Q502L
Q502R
Q503L
Q503R
Q504L
Q504R
Q505L
Q505R
Q506L
Q506R
Q513
CN501
CN502B
CN503
CN401
CN402
RV404
IC402
IC403
Q401L
Q401R
Q402L
Q402R
TH501
Q507L
Q507R
Q508L
Q508R
Q509L
Q509R
Q510L
Q510R
Q511L
Q511R
D502L
D502R
D503L
D503R
CH502A
CN502A
PG501
PG402
CN104B
CN103B
W100A
W100B
PG103
PG002
D001
D004
D005
D006
ZD002
ZD003
PR002
PR003
Q002
Q003
Q004
IC001
IC002
IC301
IC302
IC601
IC602
IC603
RA601
X601
CN101B
CN102B
CN301
D301
D601
D602
D603
D604
D605
RV401
RV402
RV403
PG301
PG401
N001

TUNER AMP SECTION

NOTE FOR PARTS LIST

- Part indicated with the mark "◎" are not always in stock and possibly to take a long period of time for supplying, or in some case supplying of part may be refused.
- When ordering of part, clearly indicate "1" and "I" (i) to avoid mis-supplying.
- Ordering part without stating its part number can not be supplied.
- Part indicated with the mark "★" is not illustrated in the exploded view.
- Not including Carbon Film ±5%, 1/4W Type in the P.W.Board parts list. (Refer to the Schematic Diagram for those parts.)

WARNING:

Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

● Resistors

Ex.: RN Type / 14K Shape and performance / 2E Power / 182 Resistance / G Allowable error / FR Others

RD : Carbon	2B : 1/8W	F : ±1%	P : Pulse-resistant type
RC : Composition	2E : 1/4W	G : ±2%	NL : Low noise type
RS : Metal oxide film	2H : 1/2W	J : ±5%	NB : Non-burning type
RW : Winding	3A : 1W	K : ±10%	FR : Fuse-resistor
RN : Metal film	3D : 2W	M : ±20%	F : Lead wire forming
RK : Metal mixture	3F : 3W		
	3H : 5W		

*** Resistance**

1 8 2 ⇒ 1800 ohm = 1.8 kohm
2 — Indicates number of zeros after effective number.
1 8 — 2-digit effective number.
- Units: ohm

1 R 2 ⇒ 1.2 ohm
2 — 1-digit effective number.
1 R — 2-digit effective number, decimal point indicated by R.
- Units: ohm

● Capacitors

Ex.: CE Type / 04W Shape and performance / 1H Dielectric strength / 2R2 Capacity / M Allowable error / BP Others

CE : Aluminum foil electrolytic	0J : 6.3V	F : ±1%	HS : High stability type
CA : Aluminum solid electrolytic	1A : 10V	G : ±2%	BP : Non-polar type
CS : Tantalum electrolytic	1C : 16V	J : ±5%	HR : Ripple-resistant type
CQ : Film	1E : 25V	K : ±10%	DL : For change and discharge
CK : Ceramic	1V : 35V	M : ±20%	HF : For assuring high frequency
CC : Ceramic	1H : 50V	Z : +80% −20%	U : UL part
CP : Oil	2A : 100V		C : CSA part
CM : Mica	2B : 125V	P : +100% −0%	W : UL-CSA type
CF : Metallized	2C : 160V		F : Lead wire forming
CH : Metallized	2D : 200V	C : ±0.25pF	
	2E : 250V	D : ±0.5pF	
	2H : 500V	= : Others	
	2J : 630V		

*** Capacity (electrolyte only)**

2 2 2 ⇒ 2200µF
2 — Indicates number of zeros after effective number.
2 2 — 2-digit effective number.
- Units: µF.

2 R 2 ⇒ 2.2µF
2 — 1-digit effective number.
2 R — 2-digit effective number, decimal point indicated by R.
- Units: µF.

*** Capacity (except electrolyte)**

2 2 2 ⇒ 2200pF=0.0022µF
2 —(More than 2)— Indicates number of zeros after effective number.
2 2 — 2-digit effective number.
- Units: µF.

2 2 1 ⇒ 220pF
1 —(0 or 1)— Indicates number of zeros after effective number.
2 2 — 2-digit effective number.
- Units: pF.

- When the dielectric strength is indicated in AC, "AC" is included after the dieelectric strength value.

PARTS LIST OF P.W.B. UNIT ASS'Y

TUNER/DISPLAY P.W.B. UNIT ASS'Y

* As for "Note" in Part No. refer to ADDENDUM PARTS LIST

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC101	9LC P044 91	IC LM7000	
IC201	9LC P045 01	IC LA1837	
IC262	NOTE	NOTE	
IC263	NOTE	NOTE	
Q101	9L2 3163 61R	Transistor DTC114EK	Europe & U.K. models only
Q102	9LC F011 21R	Transistor 2SK161	
Q103	9LC F011 41R	Transistor 2SC2058S(Q)	
Q104	9LC A002 91R	Transistor DTA114EK	
Q105	9LC F011 31R	Transistor 2SK365 (BL/GR)	
Q106	9LC A006 41R	Transistor KTC3199L(GR)	
Q108	9L2 3190 52T	Transistor HiT8050-C	
Q109	9L2 3163 61R	Transistor DTC114EK	
Q110	9LC A002 91R	Transistor DTA114EK	
Q111~114	9LC A005 81R	Transistor DTC323TK	
D101	9L2 3989 21T	Diode 1N4531T/1SS133	
D201	9L2 3481 71M	Zener diode MTZ J10A	10V
D202	9L2 3989 21T	Diode 1N4531T/1SS133	
D606	NOTE	NOTE	NOTE
D607,608	9LC H011 31R	LED SPR-505MVW	Red-Green, Europe & U.K. models only
PR201	9L2 7262 21R	IC protector ICP-N5	
RESISTORS GROUP			
R101		Carbon chip 1 kohm 1/32W	RMC73M-1F102JR
R102		Carbon chip 150 ohm 1/32W	RMC73M-1F151JR, Europe & U.K. models only
R103,104		Carbon chip 27 kohm 1/32W	RMC73M-1F273JR, Europe & U.K. models only
R105	NOTE	NOTE	NOTE
R106		NOTE	NOTE
R108,109		Carbon chip 330 ohm 1/32W	RMC73M-1F331JR
R110		Carbon chip 220 ohm 1/32W	RMC73M-1F221JR
R111		Carbon chip 4.7 kohm 1/32W	RMC73M-1F472JR
R112		Carbon chip 330 ohm 1/32W	RMC73M-1F331JR
R113		NOTE	NOTE
R114		Carbon chip 100 ohm 1/32W	RMC73M-1F101JR
R151	9L0 7000 67M	Carbon film 100 kohm 1/16W	RD14S1J104JB
R152		Carbon chip 100 kohm 1/32W	RMC73M-1F104JR
R160	9LA T012 44R	Metal oxide 10 ohm 1/4W(NB)	FLAME RES 100 1/4W NB
R161		Carbon chip 1 kohm 1/32W	RMC73M-1F102JR
R162		Carbon chip 220 ohm 1/32W	RMC73M-1F221JR
R163		Carbon chip 2.2 kohm 1/32W	RMC73M-1F222JR
R164		Carbon chip 220 ohm 1/32W	RMC73M-1F221JR
R165		Carbon chip 470 ohm 1/32W	RMC73M-1F471JR
R166		Carbon chip 22 kohm 1/32W	RMC73M-1F223JR
R167,168		Carbon chip 220 ohm 1/32W	RMC73M-1F221JR
R170,171		Carbon chip 10 kohm 1/32W	RMC73M-1F103JR
R172	9L0 7000 54M	Carbon film 10 kohm 1/16W	RD14S1J103JB
R201	9L0 7000 41M	Carbon film 1 kohm 1/16W	RD14S1J102JB
R203,204		Carbon chip 10 kohm 1/32W	RMC73M-1F103JR
R205		Carbon chip 100 ohm 1/32W	RMC73M-1F101JR
R206,207		Carbon chip 4.7 kohm 1/32W	RMC73M-1F472JR
R208		Carbon chip 10 kohm 1/32W	RMC73M-1F103JR
R209		Carbon chip 3 kohm 1/32W	RMC73M-1F302JR
R210,211		Carbon chip 4.7 kohm 1/32W	RMC73M-1F472JR
R212	NOTE	NOTE	NOTE
R213		NOTE	NOTE
R214,215		Carbon chip 3.3 kohm 1/32W	RMC73M-1F332JR
R218,219		Carbon chip 1 kohm 1/32W	RMC73M-1F102JR
R220,221		Carbon chip 220 ohm 1/32W	RMC73M-1F221JR
R222,223		Carbon chip 1 kohm 1/32W	RMC73M-1F102JR
R224		Carbon chip 5.6 kohm 1/32W	RMC73M-1F562JR
R225		Carbon chip 51 ohm 1/32W	RMC73M-1F510JR
R282		NOTE	NOTE
R283		NOTE	NOTE
R284,285		NOTE	NOTE
R286		NOTE	NOTE
R630		NOTE	NOTE
R631		NOTE	NOTE
R632		Carbon chip 330 ohm 1/32W	RMC73M-1F331JR, Europe & U.K. models only
R633		Carbon chip 220 ohm 1/32W	RMC73M-1F221JR, Europe & U.K. models only
R634		Carbon chip 330 ohm 1/32W	RMC73M-1F331JR, Europe & U.K. models only
R635		Carbon chip 220 ohm 1/32W	RMC73M-1F221JR, Europe & U.K. models only
R636		Carbon chip 680 ohm 1/32W	RMC73M-1F681JR
R637		Carbon chip 390 ohm 1/32W	RMC73M-1F391JR
R638		Carbon chip 270 ohm 1/32W	RMC73M-1F271JR
R639		Carbon chip 180 ohm 1/32W	RMC73M-1F181JR
R640		Carbon chip 150 ohm 1/32W	RMC73M-1F151JR
R641		Carbon chip 180 ohm 1/32W	RMC73M-1F181JR
R642		Carbon chip 150 ohm 1/32W	RMC73M-1F151JR
R643,644		Carbon chip 1 kohm 1/32W	RMC73M-1F102JR
R648	9LH 1295 43	Carbon film 33 ohm 1/4W	RD14S2E330JB
RT201	9L0 1603 22	Semi fixed resistor 10 kohm	RT6-3H103

TUNER AMP SECTION

Ref. No.	Part No.	Part Name	Remarks
CAPACITORS GROUP			
C101	9L0 8800 09R	Mylar film 0.01 μF/50V	CQ92M1H103KB(AMZ)
C102		Ceramic chip 0.01 μF/50V	CK73MF1H103ZR
C104	NOTE	NOTE	NOTE
C105		Ceramic chip 1000 pF/50V	CK73MF1H102ZR
C106		Ceramic chip 0.01 μF/50V	CK73MF1H103ZR
C107		Ceramic chip 0.022 μF/50V	CK73MF1H223ZR
C151	9L0 8800 09R	Mylar film 0.01 μF/50V	CQ92M1H103KB
C152		Ceramic chip 9 pF/50V	CK73MCH1H090CR
C161	9L0 8000 03Y	Electrolytic 1 μF/50V	CE04W1H1R0MB(SSL)
C162		Ceramic chip 0.01 μF/50V	CK73MF1H103ZR
C163	9L0 8000 42Y	Electrolytic 47 μF/25V	CE04W1E470MB(SSL)
C164		Ceramic chip 0.01 μF/50V	CK73MF1H103ZR
C165		Ceramic chip 0.022 μF/50V	CK73MF1H223ZR
C166	9L0 2846 23R	Electrolytic 1 μF/50V	CE04W1H1R0BP(BP)
C167,168		Ceramic chip 27 pF/50V	CC73MCH1H270JR
C169		Ceramic chip 1000 pF/50V	CK73MF1H102ZR
C170		Ceramic chip 100 pF/50V	CC73MSL1H101JR
C171		Ceramic chip 1000 pF/50V	CK73MF1H102ZR
C201	9L0 8000 42Y	Electrolytic 47 μF/25V	CE04W1E470MB(SSL)
C202~204		Ceramic chip 0.047 μF/50V	CK73MF1H473ZR
C205		Ceramic chip 0.01 μF/50V	CK73MF1H103ZR
C206	9L0 8000 03Y	Electrolytic 1 μF/50V	CE04W1H1R0MB(SSL)
C207		Ceramic chip 0.01 μF/50V	CK73MF1H103ZR
C208	9L0 8000 42Y	Electrolytic 47 μF/25V	CE04W1E470MB(SSL)
C209		Ceramic chip 0.047 μF/50V	CK73MF1H473ZR
C210	9L0 8000 03Y	Electrolytic 1 μF/50V	CE04W1H1R0MB(SSL)
C211,212	9L0 8000 18Y	Electrolytic 10 μF/50V	CE04W1H100MB(SSL)
C213	9L0 8000 03Y	Electrolytic 1 μF/50V	CE04W1H1R0MB(SSL)
C214	9L0 8000 01Y	Electrolytic 0.47 μF/50V	CE04W1HR47MB(SSL)
C215	9L0 8000 03Y	Electrolytic 1 μF/50V	CE04W1H1R0MB(SSL)
C216	9L0 8000 34Y	Electrolytic 33 μF/31.5V	CE04W1F330MB(SSL)
C217,218		Ceramic chip 0.047 μF/50V	CK73MF1H473ZR
C219	9L0 8000 07Y	Electrolytic 3.3 μF/50V	CE04W1H3R3MB(SSL)
C220	9L0 8000 26Y	Electrolytic 22 μF/50V	CE04W1H220MB(SSL)
C221	NOTE	NOTE	NOTE
C222		NOTE	NOTE
C223	9L0 8000 18Y	Electrolytic 10 μF/50V	CE04W1H100MB(SSL)
C224	NOTE	NOTE	NOTE
C225	NOTE	NOTE	NOTE
C226,227		Ceramic chip 2700 pF/50V	CK73MB1H272BR, Europe & U.K. models only
C228,229	9L0 8000 05Y	Electrolytic 2.2 μF/50V	CE04W1H2R2MB(SSL)
C230	9L0 8000 18Y	Electrolytic 10 μF/50V	CE04W1H100MB(SSL)
C231	9LH 2400 68	Ceramic 0.1 μF/50V	CK14F1H104ZB(050)
C284,285		NOTE	NOTE
C286	NOTE	NOTE	NOTE
C287	NOTE	NOTE	NOTE
C288	NOTE	NOTE	NOTE
C289		NOTE	NOTE
C290		NOTE	NOTE
C291		NOTE	NOTE
C292	NOTE	NOTE	NOTE
C294	9L0 8800 16R	Mylar film 0.1 μF/50V	CQ92M1H104KB(AMZ)
C551,552		Ceramic chip 0.01 μF/50V	CK73MF1H103ZR, Europe & U.K. models only
C606	9L0 8001 43R	Electrolytic 100 μF/6.3V	CE04W0J101MB(SRA)
C607		Ceramic chip 0.01 μF/50V	CK73MF1H103ZR

Ref. No.	Part No.	Part Name	Remarks	Q'ty
OTHER PARTS GROUP				
BL1	9LB H005 32	AM RF block		1
CF101	NOTE	NOTE		1
CF102	NOTE	NOTE		1
CN101A	9LE Y004 88	10P B to B socket (9130S)		1
CN102A	9LE Y001 02	13P B to B socket (9110S)		1
CN103A	9LE D016 77	1.25 39P FFC connector (L)		1
CN104A	9LE D008 02	1.25 7P FFC connector (L)	Europe & U.K. models only	1
E001	9L0 5444 08	Lug terminal		1
FE101	NOTE	NOTE		1
FL601	9LD D000 61	FL tube (11-BT-159GK)		1
IR601	9LC W002 02	Remote sensor (28043TH2)		1
J3		Carbon chip 0ohm 1/32W	RMC73M-1F000R	1
J20		Carbon chip 0ohm 1/32W	RMC73M-1F000R	1
J22		Carbon chip 0ohm 1/32W	RMC73M-1F000R	1
J32		Carbon chip 0ohm 1/32W	RMC73M-1F000R	1
J35		Carbon chip 0ohm 1/32W	RMC73M-1F000R	1
J42		Carbon chip 0ohm 1/32W	RMC73M-1F000R	1
J57		Carbon chip 0ohm 1/32W	RMC73M-1F000R	1
J58,59		NOTE	NOTE	2
J61		Carbon chip 0ohm 1/32W	RMC73M-1F000R	1
J101		Carbon chip 0ohm 1/32W	RMC73M-1F000R	1
JK101	9LE U000 11	Ant. terminal YKD31		1
JK502	9L2 6950 33	Head phone jack		1
PG104A	9L2 6695 22W	2.5mm pin post (V) F3B-EH	U.S.A. & Canada models only	1
PG201	9L2 6742 62	3P MX pin post-test point		1
S601~609	9LF E002 21R	Tact switch (SKHVBB)		9
T201	9LB J002 52	AM IFT with CF (450kHz)		1
T202	9LB J004 22	FM discri. coil		1
T203,204	9LB J004 11	LPF (19kHz)	Europe & U.K. models only	2
X101	9L2 1701 32	Crystal 7.2MHz		1
X262	NOTE	NOTE		1
X263	NOTE	NOTE		1
Z001	9L9 4511 40	UL tube		1
#001	9LN J017 11	FL holder		1

TUNER AMP SECTION

ADDENDUM PARTS LIST

TUNER/DISPLAY P.W.B. UNIT ASS'Y

Ref. No.	Part Name	Part No.			Remarks	Q'ty
		U.S.A. & Canada	Europe & U.K.	Asia		
SEMICONDUCTORS GROUP						
IC262	IC SAA6579T	9LC K044 51	9LC K044 51	—		
IC263	IC LC7074M	9LC K044 71	9LC K044 71	—		
D606	LED SPR-505MVW	9LC H011 31R	9LC H011 31R	—	Red-Green	
RESISTORS GROUP						
R105	Carbon film 22 ohm 1/16W	9L0 7000 18M	9L0 7000 18M	9L0 7000 18M	RD14S1J220JB	
R106	Carbon chip 1 kohm 1/32W	Need	—	Need	RMC73M-1F102JR	
R106	Carbon chip 390 ohm 1/32W	—	Need	—	RMC73M-1F391JR	
R113	Carbon chip 2.7 kohm 1/32W	Need	—	Need	RMC73M-1F272JR	
R113	Carbon chip 390 ohm 1/32W	—	Need	—	RMC73M-1F391JR	
R212	Carbon film 10 kohm 1/16W	—	9L0 7000 54M	9L0 7000 54M	RD14S1J103JB	
R212	Carbon film 6.8 kohm 1/16W	9L0 7000 52M	—	—	RD14S1J682JB	
R213	Carbon chip 8.2 kohm 1/32W	Need	Need	Need	RMC73M-1F822JR	
R282	Carbon chip 10 kohm 1/32W	Need	Need	—	RMC73M-1F103JR	
R283	Carbon chip 1 Mohm 1/32W	Need	Need	—	RMC73M-1F105JR	
R284,285	Carbon chip 1 kohm 1/32W	Need	Need	—	RMC73M-1F102JR	
R286	Carbon chip 1 Mohm 1/32W	Need	Need	—	RMC73M-1F105JR	
R630	Carbon chip 330 ohm 1/32W	Need	Need	—	RMC73M-1F331JR	
R631	Carbon chip 220 ohm 1/32W	Need	Need	—	RMC73M-1F221JR	
CAPACITORS GROUP						
C104	Ceramic 0.047 µF/50V	9LH 2400 67	—	9LH 2400 67	CK14F1H473ZB(050)	
C221	Ceramic 1000 pF/50V	—	—	9L0 8900 35M	CK14B1H102KB(050)	
C221	Ceramic 560 pF/50V	9L0 8900 32M	9L0 8900 32M	—	CK14B1H561KB(050)	
C222	Ceramic chip 0.047 µF/50V	Need	Need	Need	CK73MF1H473ZR	
C224	Mylar film 0.033 µF/50V	—	9L0 8800 13R	9L0 8800 13R	CQ92M1H333KB(AMZ)	
C224	Mylar film 0.047 µF/50V	9L0 8800 14R	—	—	CQ92M1H473KB	
C225	Mylar film 0.033 µF/50V	—	9L0 8800 13R	9L0 8800 13R	CQ92M1H333KB(AMZ)	
C225	Mylar film 0.047 µF/50V	9L0 8800 14R	—	—	CQ92M1H473KB	
C284,285	Ceramic chip 27 pF/50V	Need	Need	—	CK73MCH1H270JR	
C286	Electrolytic 47 µF/25V	9L0 8000 42Y	9L0 8000 42Y	—	CE04W1E470MB(SSL)	
C287	Electrolytic 2.2 µF/50V	9L0 8000 05Y	9L0 8000 05Y	—	CE04W1H2R2MB(SSL)	
C288	Electrolytic 47 µF/25V	9L0 8000 42Y	9L0 8000 42Y	—	CE04W1E470MB(SSL)	
C289	Ceramic chip 330 pF/50V	Need	Need	—	CK73MSL1H331JR	
C290	Ceramic chip 560 pF/50V	Need	Need	—	CK73MSL1H561JR	
C291	Ceramic chip 0.01 µF/50V	Need	Need	—	CK73MF1H103ZR	
C292	Electrolytic 47 µF/25V	9L0 8000 42Y	9L0 8000 42Y	—	CE04W1E470MB(SSL)	
OTHER PARTS GROUP						
CF101	Ceramic filter SFE10.7MA-8	9L2 1349 92	—	9L2 1349 92		1
CF101	Ceramic filter SFT10.7MS2-A	—	9LB N001 01	—		1
CF102	Ceramic filter SFE10.7MS2G-A	9LB N001 11	—	9LB N001 11		1
CF102	Ceramic filter SFT10.7MS2-A	—	9LB N001 01	—		1
FE101	Tuner pack (FE340-A01)	9LH H000 31	—	9LH H000 31		1
FE101	Tuner pack (FE415-G11)	—	9L2 4286 51	—		1
J58,59	Carbon chip 0ohm 1/32W	Need	—	Need	RMC73M-1F0O0R	2
X262	Crystal 4.332MHz	9L2 1701 33F	9L2 1701 33F	—		1
X263	Ceramic 4.00 MHz	9L2 7920 71	9L2 7920 71	—		1

MAIN P.W.B. UNIT ASS'Y

* As for "Note" in Part No. refer to ADDENDUM PARTS LIST

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC001	9LC P045 13	IC BA12ST	
IC002	9LC P024 11	IC KIA7805	
IC301	9L2 3016 92W	IC LC78211	
IC302	9L2 3883 01R	IC BA4558F	
IC401,402	9L2 3883 01R	IC BA4558F	
IC403	9LC K076 21R	IC BA6208F	
IC601	9LC K076 01	IC HD6433726H-D45	
IC602	9LC P007 12R	IC KIA7045P	
IC603	9LC K076 11R	IC BR9040F	
Q001	9L2 3286 25T	Transistor 2SB647(C)	
Q002	9L2 3256 91R	Transistor 2SC2412K(Q/R)	
Q003	9L2 3286 25T	Transistor 2SB647(C)	
Q004	9LC A006 61R	Transistor KTA1267GR	
Q401L,401R	9LC A005 81R	Transistor DTC323TK	
Q402L,402R	9LC A005 81R	Transistor DTC323TK	
Q501L,501R	9LC F011 81R	Transistor 2SA970(BL)	
Q502L,502R	9LC F011 81R	Transistor 2SA970(BL)	
Q503L,503R	9LC F012 01R	Transistor 2SC1841(E/F)	
Q504L,504R	9LC F012 01R	Transistor 2SC1841(E/F)	
Q505L,505R	9LC F012 01R	Transistor 2SC1841(E/F)	
Q506L,506R	9LC F011 91R	Transistor 2SA988(E/F)	
Q507L,507R	9L2 3181 91	Transistor 2SC1815(GR)	
Q508L,508R	9L2 3286 32	Transistor 2SD667A(C)	
Q510L,510R	9L2 3286 22	Transistor 2SB647A(C)	
Q512L,512R	9L2 3256 91R	Transistor 2SC2412K(Q/R)	
Q513	9LC A006 91R	Transistor 2SA1037AK(Q/R)	
Q514,515	9L2 3256 91R	Transistor 2SC2412K(Q/R)	
Q516	9LC A006 91R	Transistor 2SA1037AK(Q/R)	
Q517	9L2 3163 61R	Transistor DTC114EK	
Q518	9LC A005 81R	Transistor DTC323TK	
Q519,520	9L2 3256 91R	Transistor 2SC2412K(Q/R)	
Q521L,521R	9LC A003 01R	Transistor DTC143EK	
Q601	9LC A006 91R	Transistor 2SA1037AK(Q/R)	
Q602,603	9L2 3256 91R	Transistor 2SC2412K(Q/R)	
Q604	9LC A002 92R	Transistor DTA144EK	
Q605	9L2 3166 91R	Transistor DTC144EK	
Q606	9LC A002 91R	Transistor DTA114EK	
D001	9L2 3374 61W	Diode S4VB20	
D002	9LC C007 01R	Diode S1B	
D003,004	9L2 3980 61T	Diode 1N4002	
D005,006	9L2 3989 21T	Diode 1N4531/1SS133	
D007	9LC C000 03R	Diode 1SS355	
D008	9LC C007 01R	Diode S1B	

Ref. No.	Part No.	Part Name	Remarks
D009,010	9LC C006 61R	Diode RB160L-40(chip)	
D011, 012	NOTE	NOTE	
D301	9L2 3989 21T	Diode 1N4531/1SS133	
D501L,501R	9LC C000 03R	Diode ISS355	
D502L,502R	9L2 3312 32M	Diode 1S2471B	
D503L,503R	9L2 3312 32M	Diode 1S2471B	
D504L,504R	9LC C000 03R	Diode ISS355	
D506,507	9LC C000 03R	Diode ISS355	
D508	9LC H019 71	LED LH5230/P1	Red
D509, 510	9LC C000 03R	Diode 1SS355	
D602	NOTE	NOTE	
D603	NOTE	NOTE	
D605	NOTE	NOTE	
D609	9LC C000 03R	Diode 1SS355	
D610	9L2 3989 21T	Diode 1N4531/1SS133	
ZD001	9L2 3482 71M	Zener diode MTZ-J27A	27V
ZD002	9L2 3481 11M	Zener diode MTZ-J5.6A	5.6V
ZD003	9L2 3481 93M	Zener diode MTZ-J12C	12V
ZD601,602	9L2 3481 21M	Zener diode MTZ-J6.2A	6.2V
⚠PR001~003	9L2 7262 21R	IC protector ICP-N5	
RESISTORS GROUP			
R001	9LH 1390 06	Composition 2.7 Mohm 1/2W	RC14GF2H275KBFO, U.S.A. & Canada models only
R002	9LH 1133 71	Carbon film 3.3 kohm 1/2W	RD14S2H332JB
R003	9L0 7000 54M	Carbon film 10 kohm 1/16W	RDL-103J1-16LT
R004~007		Carbon chip 10 kohm 1/32W	RMC73M-1F103JR
R008	9LH 1133 62	Carbon film 2.2 kohm 1/2W	RD14S2H222JB
R009	9LH 1296 01	Carbon film 1 kohm 1/4W	RD14S2E102JB
R010		Carbon chip 33 kohm 1/32W	RMC73M-1F333JR
R011		Carbon chip 8.2 kohm 1/32W	RMC73M-1F822JR
R012		Carbon chip 22 kohm 1/32W	RMC73M-1F223JR
R301,302		Carbon chip 470 ohm 1/32W	RMC73M-1F471JR
R303,304		Carbon chip 82 kohm 1/32W	RMC73M-1F823JR
R305,306		Carbon chip 820 ohm 1/32W	RMC73M-1F821JR
R307,308		Carbon chip 6.8 kohm 1/32W	RMC73M-1F682JR
R309,310		Carbon chip 5.6 kohm 1/32W	RMC73M-1F562JR
R311,312		Carbon chip 47 kohm 1/32W	RMC73M-1F473JR
R313,314		Carbon chip 820 ohm 1/32W	RMC73M-1F821JR
R315,316		Carbon chip 6.8 kohm 1/32W	RMC73M-1F682JR
R317,318		Carbon chip 1 Mohm 1/32W	RMC73M-1F105JR
R319,320		Carbon chip 7.5 kohm 1/32W	RMC73M-1F752JR
R321,322		Carbon chip 1 Mohm 1/32W	RMC73M-1F105JR
R323,324		Carbon chip 470 ohm 1/32W	RMC73M-1F471JR

TUNER AMP SECTION

Ref. No.	Part No.	Part Name	Remarks
R325		Carbon chip 100 kohm 1/32W	RMC73M-1F104JR
R326		Carbon chip 680 kohm 1/32W	RMC73M-1F684JR
R327,328		Carbon chip 100 kohm 1/32W	RMC73M-1F104JR
R329,330		Carbon chip 1 kohm 1/32W	RMC73M-1F102JR
R331,332		Carbon chip 3.6 kohm 1/32W	RMC73M-1F362JR
R333,334		Carbon chip 100 kohm 1/32W	RMC73M-1F104JR
R401L,401R		Carbon chip 24 kohm 1/32W	RMC73M-1F243JR
R402L,402R		Carbon chip 220 ohm 1/32W	RMC73M-1F221JR
R403L,403R		Carbon chip 10 kohm 1/32W	RMC73M-1F103JR
R404L,404R		Carbon chip 22 kohm 1/32W	RMC73M-1F223JR
R405L,405R		Carbon chip 39 kohm 1/32W	RMC73M-1F393JR
R406L,406R		Carbon chip 1 kohm 1/32W	RMC73M-1F102JR
R407L,407R		Carbon chip 1 Mohm 1/32W	RMC73M-1F105JR
R408L,408R		Carbon chip 1 kohm 1/32W	RMC73M-1F102JR
R409L,409R		Carbon chip 27 kohm 1/32W	RMC73M-1F273JR
R410L,410R		Carbon chip 7.5 kohm 1/32W	RMC73M-1F752JR
R411L,411R		Carbon chip 330 ohm 1/32W	RMC73M-1F331JR
R412L,412R		Carbon chip 470 kohm 1/32W	RMC73M-1F474JR
R501L		Carbon chip 1 kohm 1/32W	RMC73M-1F102JR
R501R	9L0 7000 41M	Carbon film 1 kohm 1/16W	RDL-102J1-16LT
R502L,502R		Carbon chip 0 ohm 1/32W	RMC73M-1F000JR
R503L,503R		Carbon chip 10 kohm 1/32W	RMC73M-1F103JR
R504L,504R		Carbon chip 470 ohm 1/32W	RMC73M-1F471JR
R505L,505R		Carbon chip 12 kohm 1/32W	RMC73M-1F123JR
R506L,506R		Carbon chip 30 ohm 1/32W	RMC73M-1F300JR
R507L,507R	9LA T011 77R	Fusible 2.2 kohm 1/4W (FR)	RN45B2E222JB-FR
R508L,508R	9LA T011 77R	Fusible 2.2 kohm 1/4W (FR)	RN45B2E222JB-FR
R509L,509R	9L0 7000 55M	Carbon film 12 kohm 1/16W	RDL-123J1-16LT
R510L,510R		Carbon chip 47 ohm 1/32W	RMC73M-1F470JR
R511L,511R		Carbon chip 430 ohm 1/32W	RMC73M-1F431JR
R512L,512R	9LA T012 47T	Carbon film 130 ohm 1/4W	RD14S2E131J
R513L,513R	9LA T012 47T	Carbon film 130 ohm 1/4W	RD14S2E131J
⚠R514L,514R	9LA T011 74R	Fusible 68 ohm 1/4W (FR)	RD45B2E680JNB-FR
R515L,515R		Carbon chip 5.6 kohm 1/32W	RMC73M-1F562JR
R516L,516R		Carbon chip 75 kohm 1/32W	RMC73M-1F753JR
R517L,517R		Carbon chip 9.1 kohm 1/32W	RMC73M-1F912JR
R518L,518R	9LA T012 53T	Carbon film 220 ohm 1/4W	RD14S2E221J1
R519L,519R	9LA T010 12R	Metal oxide 0.22 ohm 1W	RE-R22J0001N
R520L,520R	9LA T010 12R	Metal oxide 0.22 ohm 1W	RE-R22J0001N
R521L,521R	9LA T010 12R	Metal oxide 0.22 ohm 1W	RE-R22J0001N
R522L,522R	9LA T010 12R	Metal oxide 0.22 ohm 1W	RE-R22J0001N
R523L,523R		Carbon chip 10 kohm 1/32W	RMC73M-1F103JR
R524L,524R		Carbon chip 10 kohm 1/32W	RMC73M-1F103JR
R525L,525R		Carbon chip 20 kohm 1/32W	RMC73M-1F203JR
R526L,526R		Carbon chip 270 kohm 1/32W	RMC73M-1F274JR
R527L,527R		Carbon chip 20 kohm 1/32W	RMC73M-1F203JR
R528L,528R	9L0 7000 05M	Carbon film 2.2 kohm 1/16W	RDL-2R2J1-16LT
R529L,529R		Carbon chip 0ohm 1/32W	RMC73M-1F000R
R530L,530R	9LA T010 47R	Metal oxide 4.7 ohm 1W	RE-4R7J0001N
R531		Carbon chip 10 kohm 1/32W	RMC73M-1F103JR

Ref. No.	Part No.	Part Name	Remarks
R532		Carbon chip 13 kohm 1/32W	RMC73M-1F133JR
R533L,533R		Carbon chip 22 kohm 1/32W	RMC73M-1F223JR
R534		Carbon chip 22 kohm 1/32W	RMC73M-1F223JR
R535L,535R	9LH 1132 89	Carbon film 150 ohm 1/2W	RD14S2H151JB
R536	9LH 1295 53	Metal oxide 82 ohm 1/4W	RES 1/4W 82 ohm
R537		Carbon chip 10 kohm 1/32W	RMC73M-1F103JR
R538,539		Carbon chip 22 kohm 1/32W	RMC73M-1F223JR
R540		Carbon chip 2.2 kohm 1/32W	RMC73M-1F222JR
R541		Carbon chip 20 kohm 1/32W	RMC73M-1F203JR
R542		Carbon chip 4.7 kohm 1/32W	RMC73M-1F472JR
R542L,542R	9LH 1132 90	Carbon film 180 ohm 1/2W	RD14S2H181JB
R543	9L0 1870 96M	Carbon film 20 kohm 1/16W	RDL-203J1-16LT
R543L,543R		Carbon chip 0ohm 1/32W	RMC73M-1F000R
R544R		Carbon chip 0ohm 1/32W	RMC73M-1F000R
R601		Carbon chip 100 ohm 1/32W	RMC73M-1F101JR
R602		Carbon chip 220 ohm 1/32W	RMC73M-1F221JR
R603		Carbon chip 47 kohm 1/32W	RMC73M-1F473JR
R604		Carbon chip 1 kohm 1/32W	RMC73M-1F102JR
R605,606		Carbon chip 22 kohm 1/32W	RMC73M-1F223JR
R607		Carbon chip 2.2 kohm 1/32W	RMC73M-1F222JR
R608,509		Carbon chip 22 kohm 1/32W	RMC73M-1F223JR
R610~612		Carbon chip 10 kohm 1/32W	RMC73M-1F103JR
R613		Carbon chip 22 kohm 1/32W	RMC73M-1F223JR
R614		Carbon chip 10 kohm 1/32W	RMC73M-1F103JR
R615		Carbon chip 470 ohm 1/32W	RMC73M-1F471JR
R616		Carbon chip 10 kohm 1/32W	RMC73M-1F103JR
R617		Carbon chip 1 Mohm 1/32W	RMC73M-1F105JR
R618~620		Carbon chip 10 kohm 1/32W	RMC73M-1F103JR
R621,622		Carbon chip 1 kohm 1/32W	RMC73M-1F102JR
R623~631		Carbon chip 10 kohm 1/32W	RMC73M-1F103JR
R632	9L0 7000 41M	Carbon film 1 kohm 1/16W	RD14S1J102JB
R633		Carbon chip 10 kohm 1/32W	RMC73M-1F103JR
RV401,402	9LA Y001 88	Variable resistor 50 kohm	BASS,TREBLE
RV403	9LA Y003 91	Variable resistor 100 kohm	BALANCE
RV404	9LA Y002 51	Variable resistor 100 kohm RK16812MG	VOLUME (Motor)
VR502L,502R	9L0 1603 17	Semi fixed resistor 5 kohm	RT6-3V502
CAPACITORS GROUP			
C001	9L0 8932 39R	Ceramic 0.01 µF/50V	CKM-103Z500F
C002	9LA L012 61R	Electrolytic 100 µF/50V	RJ350V101M
C003	9LA L012 62R	Electrolytic 10 µF/50V	RJ350V100M
C004~006	9L0 8932 39R	Ceramic 0.01 µF/50V	CKM-103Z500F
C007,008	9L0 8932 42R	Ceramic 0.022 µF/50V	CKM-223Z500F
C009	9L0 8000 53Y	Electrolytic 100 µF/50V	CE04W1H101MB(SSL)
C010	9L0 8000 18Y	Electrolytic 10 µF/50V	CE04W1H100MB(SSL)
C011	9L0 8000 18Y	Electrolytic 10 µF/50V	CE04W1H100MB(SSL)
C012	9L0 8000 18Y	Electrolytic 10 µF/50V	CE04W1H100MB(SSL)
C013	9L0 8932 39R	Ceramic 0.01 µF/50V	CKM-103Z500F

Ref. No.	Part No.	Part Name	Remarks
C014,015	9LA L004 71	Electrolytic 8200 μF/50V	CE04W1H822M
C016	9L0 8932 39R	Ceramic 0.01 μF/50V	CKM-103Z500F
C017	9L0 8000 18Y	Electrolytic 10 μF/50V	E04W1H100MB(SSL)
C018	9L0 8932 39R	Ceramic 0.01 μF/50V	CKM-103Z500F
C019	9L0 8932 46R	Ceramic 0.047 μF/50V	CKM-473Z500F
C020	9L0 8932 39R	Ceramic 0.01 μF/50V	CKM-103Z500F
C021	9LA L004 76Q	Electrolytic 220 μF/25V	CE04W1E222M
C022	9L0 8932 46R	Ceramic 0.047 μF/50V	CKM-473Z500F
C023	9L0 8000 03Y	Electrolytic 1 μF/50V	CE04W1H1R0MB(SSL)
C301	9L0 8932 39R	Ceramic 0.01 μF/50V	CKM-103Z500F
C302,303		Ceramic chip 680 pF/50V	CCM-681J500SL
C304,305		Ceramic chip 10 pF/50V	CCM-100J500SL
C306,307		Ceramic chip 220 pF/50V	CCM-221J500SL
C308	9L0 8932 39R	Ceramic 0.01 μF/50V	CKM-103Z500F
C309,310		Ceramic chip 10 pF/50V	CCM-100J500SL
C311	9L0 8932 39R	Ceramic 0.01 μF/50V	CKM-103Z500F
C312~315		Ceramic chip 220 pF/50V	CCM-221J500SL
C316	9L0 8932 39R	Ceramic 0.01 μF/50V	CKM-103Z500F
C317	9L0 8932 42R	Ceramic 0.022 μF/50V	CKM-223Z500F
C318,319	9L0 8000 03Y	Electrolytic 1 μF/50V	CE04W1H1R0MB(SSL)
C320,321		Ceramic chip 100 pF/50V	CCM-101J500SL
C322,323	9L0 8000 16Y	Electrolytic 10 μF/25V	CE04W1E100MB(SSL)
C324	9L0 8932 42R	Ceramic 0.022 μF/50V	CKM-223Z500F
C325,326	9L0 8000 16Y	Electrolytic 10 μF/25V	CE04W1E100MB(SSL)
C401L,401R	9LH 2740 32K	Mylar film 1800 pF/50V	CQ92M1H182KEBK
C402L,402R	9L0 8800 12R	Mylar film 0.022 μF/50V	CQ92M1H223KEBK
C403L,403R	9L0 8800 12R	Mylar film 0.022 μF/50V	CQ92M1H223KEBK
C404L,404R	9L0 8000 03Y	Electrolytic 1 μF/50V	CE04W1H1R0MB(SSL)
C405L,405R		Ceramic chip 220 pF/50V	CCM-221J500SL
C406L,406R		Ceramic chip 220 pF/50V	CCM-221J500SL
C407L,407R	9L0 8000 18Y	Electrolytic 10 μF/50V	CE04W1H100MB(SSL)
C408L,408R	9L0 8000 42Y	Electrolytic 47 μF/25V	CE04W1E470MB(SSL)
C409L,409R	9L0 2539 42R	Electrolytic 0.22 μF/50V	CE04W1HR22MB
C410L,410R	9L0 2539 41R	Electrolytic 0.15 μF/80V	CE04W1KR15MB
C411	9L0 8000 18Y	Electrolytic 10 μF/50V	CE04W1H100MB(SSL)
C412	9L0 8932 39R	Ceramic 0.01 μF/50V	CKM-103Z500F
C413		Ceramic chip 0.1 μF/16V	CK73MB1C104KR
C414	9L0 8800 09R	Mylar film 0.01 μF/50V	CQ92M1H103KB
C415	9L0 8900 87R	Ceramic 1000 pF/50V	CK14B1H102KB(050)
C423,424	9L0 8000 18Y	Electrolytic 10 μF/50V	CE04W1H100MB
C501L,501R	9L0 8000 16Y	Electrolytic 10 μF/25V	CE04W1E100MB(SSL)
C502L,502R		Ceramic chip 220 pF/50V	CC73MSL1H221J
C503L,503R		Ceramic chip 220 pF/50V	CC73MSL1H221J
C504L,504R		Ceramic chip 6800 pF/50V	CK73MB1H682J
C505L,505R		Ceramic chip 10 pF/50V	CC73MSL1H100J
C506L,506R	9L0 8800 03R	Mylar film 1000 pF/50V	CQ92M1H102KB
C507L,507R	9L0 8800 03R	Mylar film 1000 pF/50V	CQ92M1H102KB
C508L,508R	9L0 8000 59Y	Electrolytic 220 μF/25V	CE04W1E221MB(SSL)
C509L,509R	9L0 2478 76R	Ceramic 18 pF/500V	CC45SL2H180KB
C510,511	9L0 8000 53Y	Electrolytic 100 μF/50V	CE04W1H101MB(SSL)
C513L,513R	9L0 8000 12Y	Electrolytic 4.7 μF/50V	CE04W1H4R7MB(SSL)
C514L,514R	9L0 8000 03Y	Electrolytic 1 μF/50V	CE04W1H1R0MB(SSL)
C515L,515R	9L0 2435 05R	Ceramic 220 pF/500V	CK45B2H221KB
C516L,516R	9L0 8000 12Y	Electrolytic 4.7 μF/50V	CE04W1H4R7MB(SSL)
C517L,517R		Ceramic chip 0.01 μF/50V	CK73MB1H103K
C518L,518R	9L0 8800 16R	Mylar film 0.1 μF/50V	CQ92M1H104KEB
C519		Ceramic chip 0.01 μF/50V	CK73MB1H103K
C520	9L0 8000 64R	Electrolytic 330 μF/6.3V	CE04W0J331MB
C521,522	9L0 8932 39R	Ceramic 0.01 μF/50V	CKM-103Z500F
C523	9L0 8932 46R	Ceramic 0.047 μF/50V	CKM-473Z500F
C524,525	9L0 8800 09R	Mylar film 0.01 μF/50V	CQ92M1H103KB
C526	9L0 8000 42Y	Electrolytic 47 μF/25V	CE04W1E470MB(SSL)
C527L,527R	9L0 8932 46R	Ceramic 0.047 μF/50V	CKM-473Z500F
C528,529	9L0 8000 18Y	Electrolytic 10 μF/50V	CE04W1H100MB(SSL)
C601,602		Ceramic chip 1000 pF/50V	CCM-102J500SL
C603	9L0 8000 26Y	Electrolytic 22 μF/50V	CE04W1H220MB(SSL)
C604,605	9L0 8932 39R	Ceramic 0.01 μF/50V	CKM-103Z500F
C608	9L0 8000 48R	Electrolytic 100 μF/10V	CE04W1A101MB
C609		Ceramic chip 1000 pF/50V	CCM-102J500SL
C610	9L0 8932 39R	Ceramic 0.01 μF/50V	CKM-103Z500F
C611~613	9L0 8932 46R	Ceramic 0.047 μF/50V	CKM-473Z500F
C614	9LH 2400 67	Ceramic 0.047 μF/50V	CK14F1H473ZB(050)
C615	9L0 8932 46R	Ceramic 0.047 μF/50V	CKM-473Z500F
C616	9LH 2400 67	Ceramic 0.047 μF/50V	CK14F1H473ZB(050)
C617	9L0 8932 46R	Ceramic 0.047 μF/50V	CKM-473Z500F
C619	9L0 2846 48R	Electrolytic 22 μF/25V (BP)	CE04W1E220MB (BP)

OTHER PARTS GROUP				Q'ty
CH502A,502B	9L2 6745 93	PRG-cable holder 05P		2
CN002	9LE F059 12	3P VH board-in		1
CN003	9LE F031 86	4P MX B-C connector		1
CN101B	9LE Y005 18	B/B pin header 9130B-10		1
CN102B	9LE Y000 82	B/B pin header 9110B-13		1
CN103B	9LE D016 67	1.25mm FFC connector 39P		1
CN104B	9LE D007 72	1.25mm FFC connector 7P	Europe & U.K. models only	1
CN301	9LE D014 05	3P MX board-in		1
CN401	9LE F042 52	5P PH board-in		1
CN402	9LE F018 17	6P PH board-in		1
CN501	9LE Y000 99	11P B to B socket (9110S)		1
CN502A	9LE Y005 18	B/B pin header 9130B-10		1
CN502B	9LE Y004 88	10P B to B socket (9130S)		1
CN503	9LE D014 08	MX 5P connector		1
E001,002	9L2 7292 52R	Fuse holder		2
E003,004	9L2 7292 52R	Fuse holder	U.S.A. & Canada models only	2
E005,006	NOTE	NOTE		2

TUNER AMP SECTION

Ref. No.	Part No.	Part Name	Remarks	Q'ty
E100	9L5 4440 8	Lug terminal		1
J15		Carbon chip 0ohm 1/4W	RK73Z2ETD0 J	1
J30		Carbon chip 0ohm 1/32W	RMC73M-1F000R	1
J41		Carbon chip 0ohm 1/32W	RMC73M-1F000R	1
J84,85		Carbon chip 0ohm 1/32W	RMC73M-1F000R	2
J98		Carbon chip 0ohm 1/32W	RMC73M-1F000R	1
J106		Carbon chip 0ohm 1/32W	RMC73M-1F000R	1
J113		**NOTE**	**NOTE**	1
J134		Carbon chip 0ohm 1/32W	RMC73M-1F000R	1
J148		Carbon chip 0ohm 1/32W	RMC73M-1F000R	1
J150		Carbon chip 0ohm 1/32W	RMC73M-1F000R	1
J183		Carbon chip 0ohm 1/32W	RMC73M-1F000R	1
J188,189		Carbon chip 0ohm 1/32W	RMC73M-1F000R	2
J200		Carbon chip 0ohm 1/32W	RMC73M-1F000R	1
J501		Carbon chip 0ohm 1/32W	RMC73M-1F000R	1
J513,514		Carbon chip 0ohm 1/32W	RMC73M-1F000R	2
J516,517		Carbon chip 0ohm 1/32W	RMC73M-1F000R	2
J519,520		Carbon chip 0ohm 1/32W	RMC73M-1F000R	2
J543		Carbon chip 0ohm 1/4W	RK73Z2ETD0 J	1
J545		Carbon chip 0ohm 1/32W	RMC73M-1F000R	1
J547		Carbon chip 0ohm 1/32W	RMC73M-1F000R	1
J549		Carbon chip 0ohm 1/32W	RMC73M-1F000R	1
J562		Carbon chip 0ohm 1/32W	RMC73M-1F000R	1
J567		Carbon chip 0ohm 1/32W	RMC73M-1F000R	1
J568,569		Carbon chip 0ohm 1/32W	RMC73M-1F000R	2
J572,573		Carbon chip 0ohm 1/32W	RMC73M-1F000R	2
J576-580		Carbon chip 0ohm 1/32W	RMC73M-1F000R	5
J587		Carbon chip 0ohm 1/32W	RMC73M-1F000R	1
J592,593		Carbon chip 0ohm 1/32W	RMC73M-1F000R	2
J594		Carbon chip 0ohm 1/4W	RK73Z2ETD0 J	1
J595~597		Carbon chip 0ohm 1/32W	RMC73M-1F000R	3
J602		Carbon chip 0ohm 1/32W	RMC73M-1F000R	1
J607		Carbon chip 0ohm 1/32W	RMC73M-1F000R	1
J610		Carbon chip 0ohm 1/32W	RMC73M-1F000R	1
⚠JK001	**NOTE**	**NOTE**		1
⚠JK001	**NOTE**	**NOTE**		1
JK301	9LE R003 92	3P US pin jack (white)		1
JK302	9LE R003 91	3P US pin jack (red)		1
JK303	9LE R003 92	3P US pin jack (white)		1
JK304	9LE R003 91	3P US pin jack (red)		1
JK501	9LE U000 86	4P SP terminal		1
JK503	9LE R002 41	1P US pin jack		1
JK601,602	9L2 6714 13	3.5 mini jack		2
L501L,501R	9L2 2273 63	Trap coil 1μH		2
N001	9L4 5372 34	Style pin		1
PG001	9L2 6742 84	PLG-VH plug 2P4		1
PG002	9L2 6688 12W	3.96mm pin header (B3P-VH)		1
PG003	9L2 6742 63	MX mini pin post 4P		1
PG104	9L2 9991 22	MX pin post 3P (2.5mm)	U.S.A. & Canada models only	1
PG301	9L2 6742 62	MX mini pin post 3P		1
PG401	9L2 9590 54	PH pin post (A2001WV2-5P)		1
PG402	9L2 9590 55	TXL-P06P-B1		1
PG501	9LE Y000 79	B/B pin header 9110B-11		1
PG502	9L2 6586 94W	TXL-P05P-B1		1
PG503	9L2 6742 64	MX mini pin post 5P		1
RY501	9L2 6413 21	Relay OSA-SS-224DM3		1
TH501	9LC J001 54	Posistor PTH9M04BC222TS2F333		1
W001	9LE K002 99	1P board-in connector (ORG) 125mm		1
W002	9LE K004 86	1P board-in connector (GRY) 125mm		1
W102		UL wire #24S BLK		1
W301		UL wire #24S BLK		1
W304		UL wire #22S BLK	U.S.A. & Canada models only	1
W415		UL wire #24S BRN		1
W502	9LE D017 64	Ribbon wire 5P		1
X601	9LB P008 31	Ceramic 8.38MHz		1
#002	9L8 6914 10	Screw 3 x 10 BT bind		2
#003	9LM A009 31	Heat sink L		1
#004	9LM D033 02	Shield plate		1
#005	NOTE	NOTE		1
#006	NOTE	NOTE		1
#007	9LM N005 42	Insulate sheet	For C014,C015	2

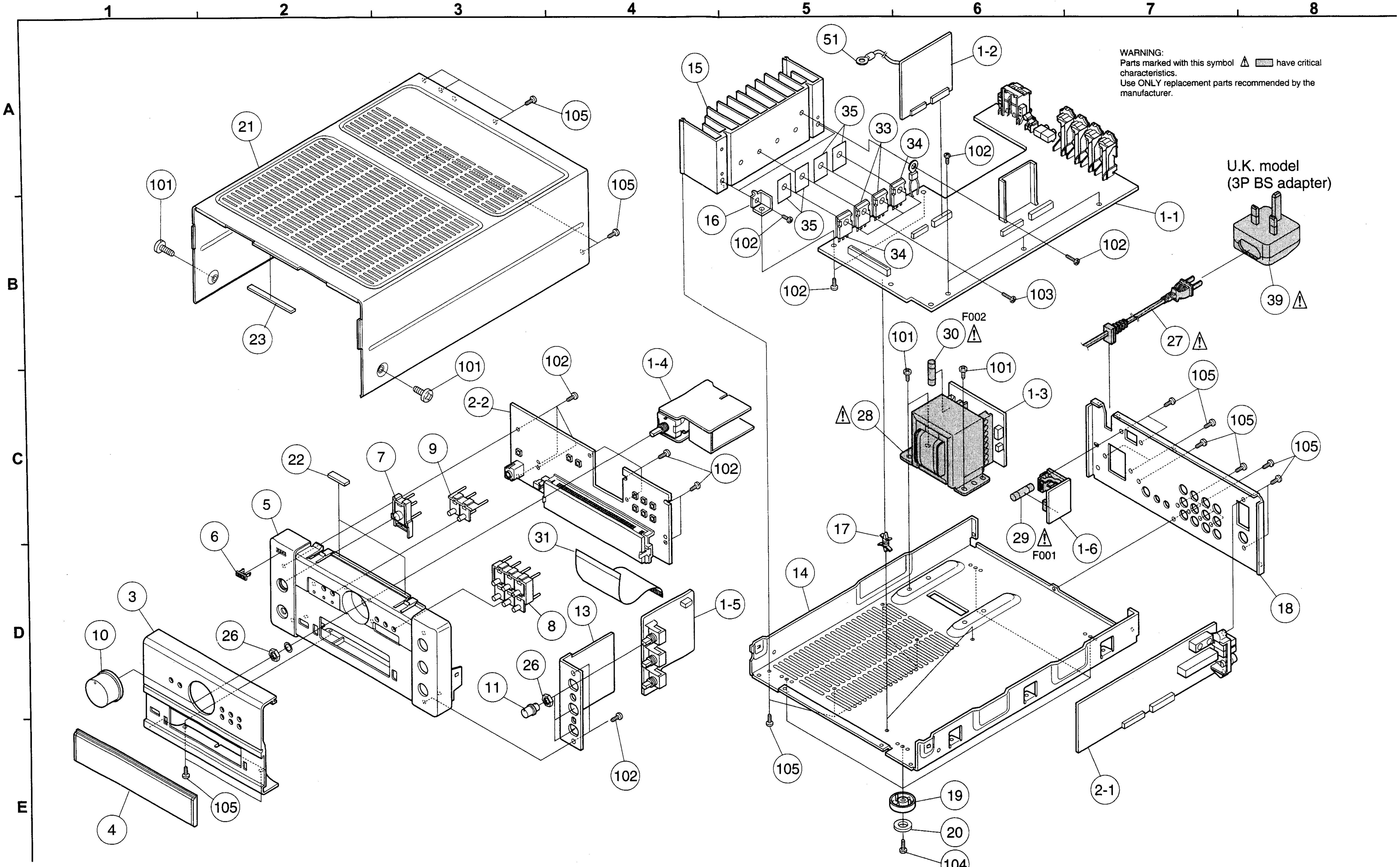
ADDENDUM PARTS LIST

MAIN P.W.B. UNIT ASS'Y

Ref. No.	Part Name	Part No.			Remarks	Q'ty
		U.S.A. & Canada	Europe & U.K.	Asia		
SEMICONDUCTORS GROUP						
D011,012	Diode RB160L-40 (chip)	—	9LC C006 61R	9LC C006 61R		
D602	Diode 1N4531/1SS133	9L2 3989 21T	—	9L2 3989 21T		
D603	Diode 1N4531/1SS133	—	9L2 3989 21T	9L2 3989 21T		
D605	Diode 1N4531/1SS133	9L2 3989 21T	9L2 3989 21T	—		
OTHER PARTS GROUP						
E005,006	Fuse holder	—	9L2 7292 52R	9L2 7292 52R		2
J113	Carbon chip 0ohm 1/32W	—	Need	Need	RMC73M-1F000R	1
JK001	AC outlet	9LE P001 32	9LE P000 91	9LE P000 91		1
#005	Shield plate	—	9LM D033 41	9LM D033 41		1
#006	Cushion felt	—	9L4 6848 69W	9L4 6848 69W		1

TUNER AMP. SECTION

EXPLODED VIEW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105
16
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102
34
1-1
102
103
102
U.K. model
(3P BS adapter)
39 ⚠
23
101
F002
30 ⚠
101
101
102
1-4
27 ⚠
2-2
⚠ 28
1-3
105
105
105
22
7
9
102
5
6
31
17
29 ⚠
F001
1-6
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18
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1-5
10
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26
11
102
105
105
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2-1
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104

WARNING:
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

PARTS LIST OF EXPLODED VIEW
TUNER AMPLIFIER SECTION

* As for "Note" in Part No. refer to ADDENDUM PARTS LIST

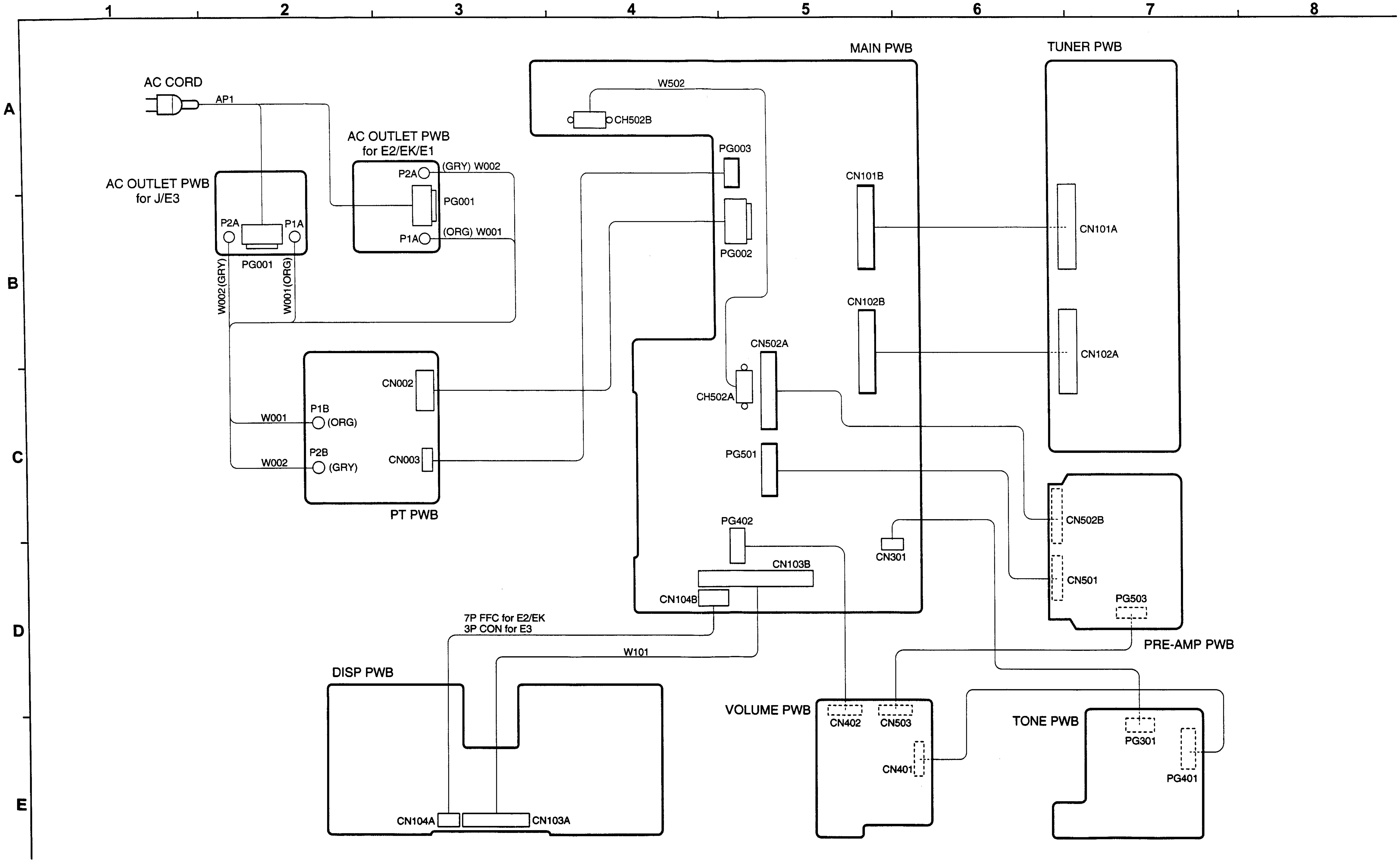
Ref. No.	Part No.	Part Name	Remarks	Q'ty
1	NOTE	Main P.W.B. unit ass'y		1
1-1		Main unit		
1-2		Pre-amp. unit		
1-3		PT unit		
1-4		Volume unit		
1-5		Tone unit		
1-6		AC outlet unit		
2	NOTE	Tuner/disp. P.W.B. unit ass'y		1
2-1		Tuner unit		
2-2		Disp. unit		
3	NOTE	Front panel AL (UDRA)	Aluminum	1
4	9LP HO58 23	Clear panel (UDRA)	Window	1
5	9LP HO59 21	Front panel (UDRA)	Plastic molding	1
6	9LP UO03 31	DENON badge		1
7	NOTE	Power button		1
8	NOTE	Function button		1
9	NOTE	Display button		1
10	NOTE	Volume knob ass'y		1
11	NOTE	Tone knob		3
★ 12	9LM E016 51	Shield sheet (trans)		1
13	9LN A215 71	Tone bracket		1
14	9LQ A012 31	Bottom chassis		1
15	9LN D001 91	Heat sink (M10)		1
16	9LN A083 31	PWB bracket C		2
17	9LM L004 41	PWB support (MLPLS-4)		2
18	NOTE	Rear plate		1
19	9LQ J003 91	Foot		4
20	9LM S002 11	Felt		4
21	9LQ A009 11	Top cover		1
22	9L4 8583 32	Spacer 14x8		2
23	9L4 8583 36	Spacer 60x8		1
★ 24	9L4 9303 12	Number sheet		1
25	NOTE	Origin label	Place of origin	1
26	9LM K002 46	Nut M9 x 0.75		4
⚠ 27	NOTE	AC cord	AP1	1
⚠ 28	NOTE	Power trans	PT301	1
⚠ 29	NOTE	NOTE	F001	1
⚠ 30	NOTE	NOTE	F002	1
31	9LE K001 19	39P FFC cable	W101	1
★ 32	9L3 9737 31	Bar lock tie		4
33	9LC F011 51	Transistor 2SC4278 (E/F)	Q509L,509R	2
34	9LC F011 61	Transistor 2SA1633 (E/F)	Q511L,511R	2
35	9LM F001 73	Insulation sheet		4
★ 36	NOTE	RDS indicator		1
★ 37	9L4 9485 11	Fuse caution label	U.S.A. & Canada models only	1
★ 38	9LQ L050 11	Caution label	U.S.A. & Canada models only	1
⚠ 39	9LE P000 62	3P BS adaptor	U.K. model only	1
★ 40	9LE D026 21	3P EH-MX connector (P=2.5)	CN104, U.S.A. & Canada models only	1
★ 41	9LE K002 35	7P FFC cable	W102, Europe & U.K. models only	1
★ 42	9L4 9485 13	Caution label	U.S.A. & Canada models only	1
51	9L5 4440 8	Lug terminal	E100	1
★ 52	9L0 8800 09R	Mylar film 0.01 mF/50V	C414, CQ92M1H103KB	1
★ 53	9L0 8900 87R	Ceramic 1000 pF/50V	C415, CK14B1H102KB(050)	1
★ 54		UL wire #22S BLK Canada models only	W307, U.S.A. &	1
★ 55	9L4 6921 00W	Spacer		1
SCREWS				
101	9L8 6796 06	Screw 4x6 DT bind B		6
102	9L8 6914 10	Screw 3x10 BT bind		NOTE
103	9L8 6914 14	Screw 3x14 BT bind		4
104	9L8 6994 08	Screw 3x8 BT bind B		4
105	9L8 6994 10	Screw 3x10 BT bind B		23

ADDENDUM PARTS LIST OF EXPLODED VIEW
TUNER AMPLIFIER SECTION

Ref. No.	Part Name	U.S.A/Canada		Europe		U.K.		Asia		Remarks
		Part No.	Q'ty	Part No.	Q'ty	Part No.	Q'ty	Part No.	Q'ty	
1	Main P.W.B. unit ass'y	9LJ T083 61		9LJ T083 62		9LJ T083 63		9LJ T083 66		
2	Tuner/disp. P.W.B. unit ass'y	9LJ T084 01		9LJ T084 02		9LJ T084 03		9LJ T084 06		
3	Front panel AL (UDRA)	9LP M065 41		9LP M065 42		9LP M065 42		9LP M065 43		Aluminum
7	Power button	9LP C022 91		9LP C022 91		9LP C022 91		9LP C022 92		
8	Function button	9LP C030 91		9LP C030 91		9LP C030 91		9LP C030 92		
9	Display button	9LP C031 01		9LP C031 01		9LP C031 01		9LP C031 02		
10	Volume knob ass'y	9LP C023 03		9LP C023 03		9LP C023 03		9LP C023 04		
11	Tone knob	9LP C023 31		9LP C023 31		9LP C023 31		9LP C023 32		
18	Rear plate	9LQ A012 41		9LQ A012 42		9LQ A012 42		9LQ A012 43		
★ 25	Origin label	9L4 9313 06		9LQ NO29 74		9LQ NO29 74		9L4 9313 06		Place of origin
⚠ 27	AC cord	9LE V007 02		9LE V005 85		9LE V005 85		9LE V005 85		AP1
⚠ 28	Power trans	9LB T011 43		9LB T011 42		9LB T011 42		9LB T011 42		PT301
⚠ 29	Fuse 3A 125V	9L2 7224 16		—		—		—		F001
⚠ 29	Fuse T3.15A 250V	—		9L2 7216 15		9L2 7216 15		9L2 7216 15		F001
⚠ 30	Fuse 2A 125V	9L2 7224 14		—		—		—		F002
⚠ 30	Fuse T800mA 250V	—		9L2 7280 71		9L2 7280 71		9L2 7280 71		F002
★ 36	RDS indicator	9LP H046 02		9LP H046 01		9LP H046 01		—		
SCREWS										
102	Screw 3x10 BT bind	9L8 6914 10	21	9L8 6914 10	21	9L8 6914 10	21	9L8 6914 10	19	

TUNER AMP SECTION

WIRING DIAGRAM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C
D
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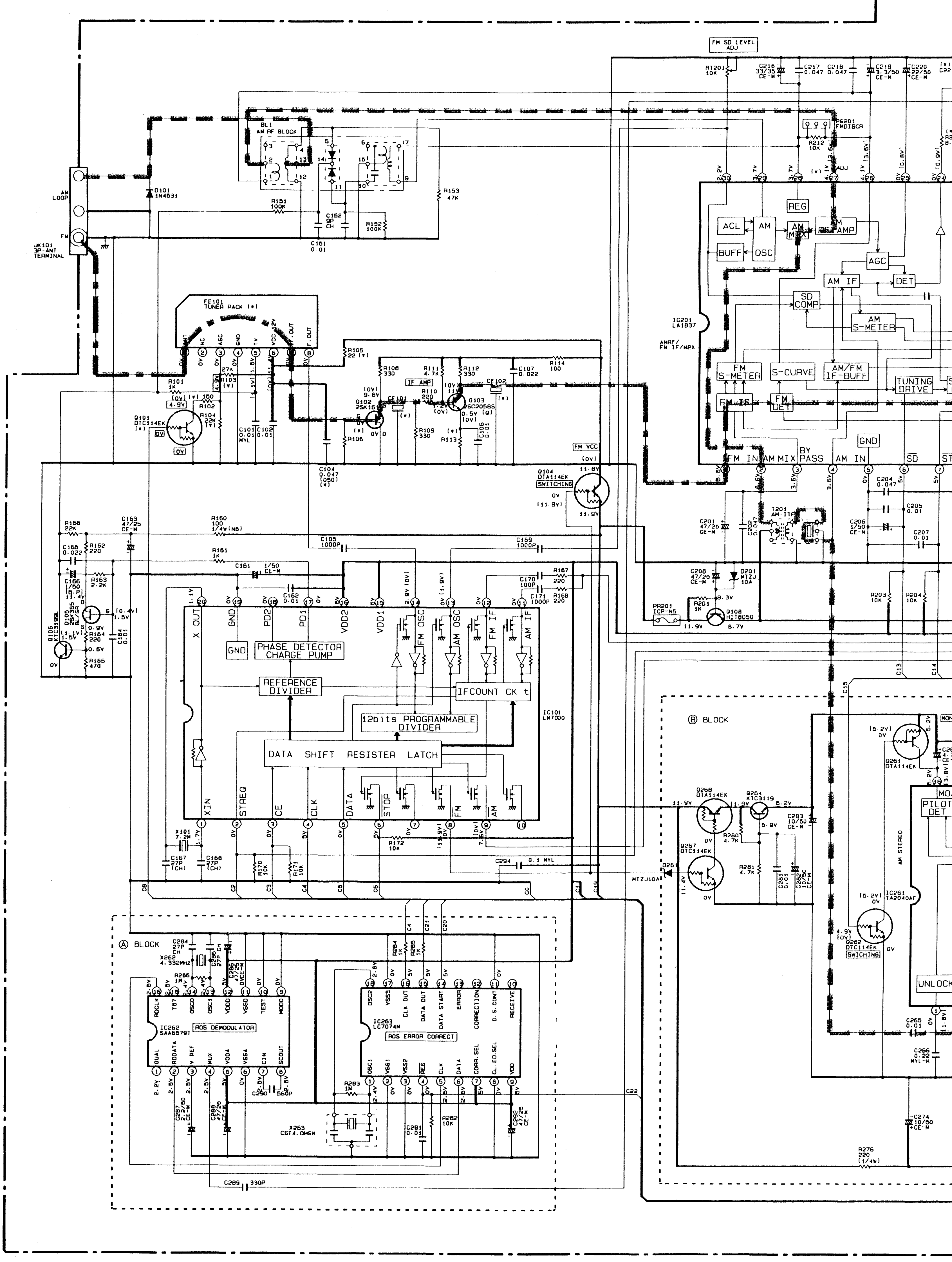
AC CORD
AP1
AC OUTLET PWB
for J/E3
P2A
P1A
PG001
W002(GRY)
W001(ORG)
AC OUTLET PWB
for E2/EK/E1
P2A
(GRY) W002
PG001
P1A
(ORG) W001
PT PWB
CN002
P1B
(ORG)
W001
P2B
(GRY)
W002
CN003
MAIN PWB
W502
CH502B
PG003
PG002
CN101B
CN102B
CN502A
CH502A
PG501
PG402
CN103B
CN104B
CN301
TUNER PWB
CN101A
CN102A
CN502B
CN501
PG503
PRE-AMP PWB
7P FFC for E2/EK
3P CON for E3
W101
DISP PWB
CN104A
CN103A
VOLUME PWB
CN402
CN503
CN401
TONE PWB
PG301
PG401

SCHEMATIC DIAGRAMS (1/3)

1 2 3 4 5

TUNER PWB ASS' Y UNIT TABLE OF DIFFERENCE TUN. DISP(CICUIT)

P#/D#	R102	R103	R104	Q101	R105	CF101	CF102	FE101	T203 T204	J58 J59	C226 C227	R212	C224 C225	C221	A-BLOCK	B-BLOCK	C222	R213	C104	R106	R113	C232
1 (A) E3	╳	╳	╳	╳	22	SFE10.7 MA-8	SFE10.7 MS26-A	3-TUNE	╳	○	╳	6.8K	0.047	560P	○	╳	○	○	○	1K	2.7K	╳
2.3 (B.C)E2	○	○	○	○	22	SFT10.7 MS2-A	SFT10.7 MS2-A	4-TUNE	○	╳	○	10K	0.033	560P	○	╳	○	○	╳	390	390	╳
6 (F) E1	╳	╳	╳	╳	22	SFE10.7 MA-8	SFE10.7 MS26-A	3-TUNE	╳	○	╳	10K	0.033	1000P	╳	╳	○	○	○	1K.	2.7K	╳
8 (H) J	╳	╳	╳	╳	150	SFE10.7 MA-8	SFE10.7 MS26-A	3-TUNE	╳	○	╳	6.8K	0.033	1000P	╳	○	╳	╳	╳	390	220	○
NOTE	FM AGC				(+B)FILTER	BAND-Width		FRONT END	FM 19kHz LPF			MUTE-BAND-Width	DE-EMPHASIS	SEPARATION	RDS	AM STEREO			FM IF			


FM SD LEVEL ADJ
BL1 AM RF BLOCK
AM LOOP
FM
JK101 3P-ANT TERMINAL
D101 1N4831
R151 100K
C152 8P CH
R152 100K
R153 47K
C151 0.01
FE101 TUNER PACK (*)
ANT
NC
AGC
GND
TV
VCC
F.OUT
R105 22 (*)
R108 330
R111 4.7K
R112 330
C107 0.022
R114 100
IF AMP
Q102 2SK161
CF101
CF102
Q103 2SC2058S
R109 330
R113
R106
C106 0.01
R101 1K
R102
R103 (*)
R104 22K (*)
Q101 DTC114EK (*)
C101 0.01
C102 0.01 MYL
C104 0.047 (050) (*)
FM VCC
Q104 DTA114EK SWITCHING
R156 22K
C165 0.022
R162 220
C163 47/25 CE-M
C166 1/50
R163 2.2K
R164 220
R165 470
C164 0.01
Q105 KTC3198
R160 100 1/4W(NB)
R161 1K
C161 1/50 CE-M
C105 1000P
C159 1000P
C162 0.01
C170 100P
C171 1000P
R167 220
R168 220
X OUT
GND
PD2
PD1
VDD2
VDD1
FM OSC
AM OSC
FM IF
AM IF
PHASE DETECTOR CHARGE PUMP
REFERENCE DIVIDER
IFCOUNT CK t
12bits PROGRAMMABLE DIVIDER
DATA SHIFT RESISTER LATCH
IC101 LM7000
XIN
STREQ
CE
CLK
DATA
STOP
FM
AM
X101 7.2M
C167 27P (CH)
C168 27P (CH)
R170 10K
R171 10K
R172 10K
C294 0.1 MYL
Ⓐ BLOCK
C284 27P CH
X262 4.332MHz
C285 27P
C286 47/25 CE-M
R286 1M
IC262 SAA6579T
RDS DEMODULATOR
ROCLK
T57
OSCO
OSCI
VDDD
VSSD
TEST
MODE
QUAL
RDDATA
V REF
MUX
VDDA
VSSA
CIN
SCOUT
C287 4.7/50 CE-M
C288 47/25 CE-M
C290 560P
X263 CSA4.0MGW
R284 1K
R285 1K
IC263 LC7074M
RDS ERROR CORRECT
OSC2
VSS3
CLK OUT
DATA OUT
DATA START
ERROR
CORRECTION
D.S.CONT
RECEIVE
OSC1
VSS1
VSS2
REE
CLK
DATA
CORR.SEL
CL.ED.SEL
VDD
R283 1M
C281 0.01
R282 10K
C292 47/25 CE-M
C289 330P
C22
R1201 10K
C216 33/35 CE-M
C217 0.047
C218 0.047
C219 3.3/50 CE-M
C220 22/50 CE-M
PC201 FMDISCR
R212 10K
IC201 LA1837
AMRF/FM IF/MPX
ACL
AM
REG
AM MIX
RF AMP
BUFF
OSC
AGC
AM IF
DET
SD COMP
AM S-METER
FM S-METER
S-CURVE
AM/FM IF-BUFF
TUNING DRIVE
FM IF
FM DET
GND
FM IN
AM MIX
BY PASS
AM IN
SD
C201 47/25 CE-M
C202
T201 AM-IFT
C204 0.047
C205 0.01
C206 1/50 CE-M
C207 0.01
C208 47/25 CE-M
D201 MTZJ 10A
PR201 ICP-N5
R201 1K
Q108 HIT8050
R203 10K
R204 10K
Ⓑ BLOCK
Q268 DTA114EK
Q264 KTC3119
C283 10/50 CE-M
R280 4.7K
R281 4.7K
Q257 DTC114EK
MTZJ10A
Q261 DTA114EK
PILOT DET
IC261 TA2040AF
Q262 DTC114EK SWICHING
UNLOCK
C265 0.01
C266 0.22 MYL-K
C274 10/50 CE-M
R276 220 (1/4W)
AM STEREO

NOTICE
ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
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WARNING:
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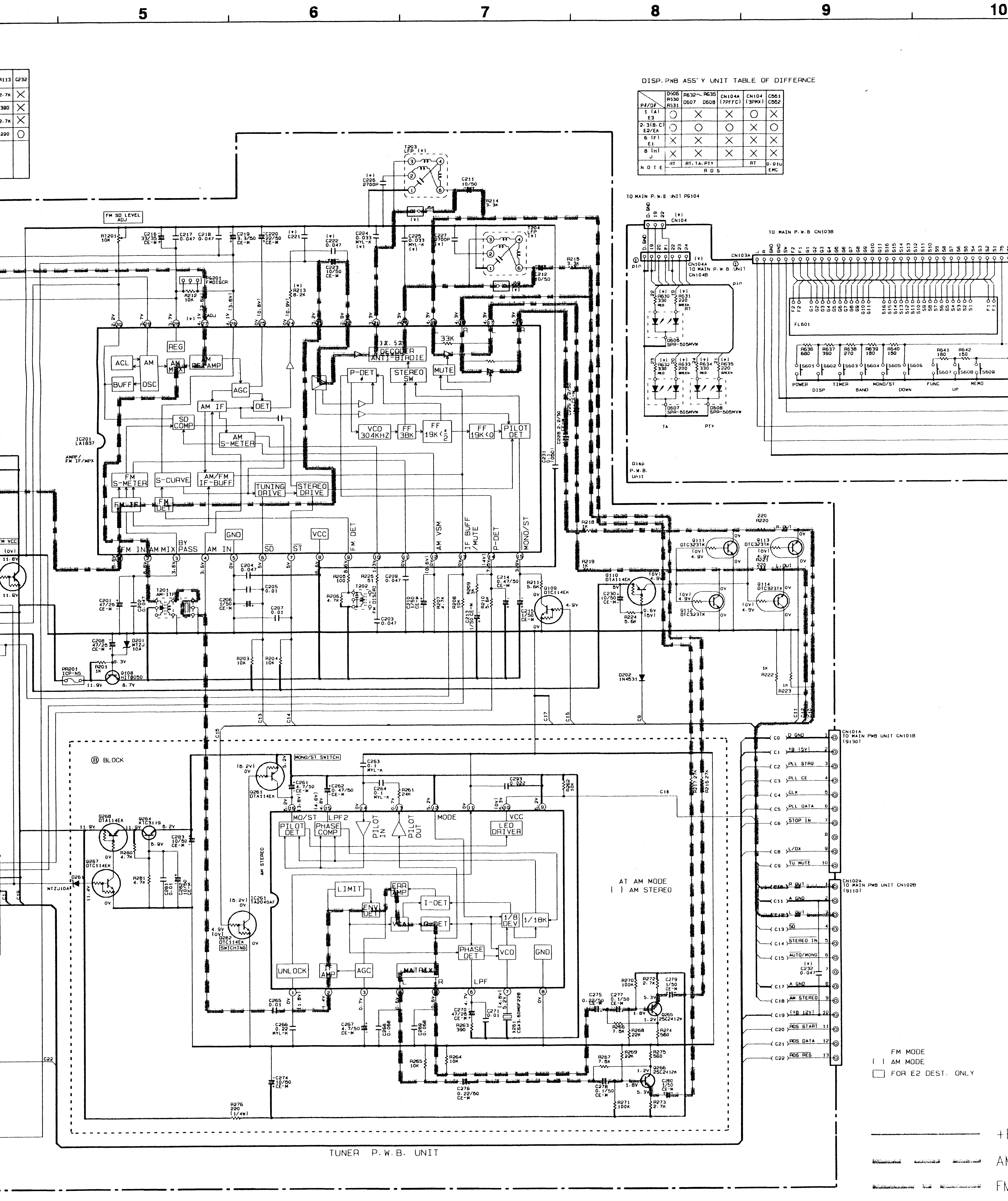

5
6
7
8
9
10
FM SD LEVEL ADJ
IC201 LA1837
AMRF/FM IF/MPX
ACL
AM
AM MPX
REG
RF AMP
BUFF
OSC
AGC
AM IF
DET
SD COMP
AM S-METER
FM S-METER
S-CURVE
AM/FM IF-BUFF
TUNING DRIVE
STEREO DRIVE
FM IF
FM DET
DECODER ANTI-BIRDIE
P-DET
STEREO SW
MUTE
VCO 304KHZ
FF 38K
FF 19K
FF 19K
PILOT DET
FM IN
AM MIX
BY PASS
AM IN
GND
SD
ST
VCC
FM DET
AM VSM
IF BUFF /MUTE
P-DET
MONO/ST
T201 AM-IF
T202 FM DISCRI
T203 LFP
T204 LFP
Q108 HIT8050
PR201 ICP-N5
D201 MTZJ 10A
Q109 DTC114EK
Q110 DTA114EK
Q111 DTC323TK
Q112 DTC323TK
Q113 DTC323TK
Q114 DTC323TK
D202 1N4531
R.OUT
L.OUT
Ⓑ BLOCK
MONO/ST SWITCH
Q261 DTA114EK
IC261 TA2040AF
Q262 DTC114EK
SWICHING
Q268 DTA114EK
Q264 XTC3119
Q267 DTC114EK
D261 MTZJ10AF
AM STEREO
MO/ST
LPF2
PILOT DET
PHASE COMP
PILOT IN
PILOT OUT
MODE
VCC
LED DRIVER
LIMIT
ENV DET
EAR AMP
I-DET
VCA
Q-DET
1/8 DEV
1/18K
PHASE DET
VCO
GND
UNLOCK
IF AMP
AGC
MATRIX
L
R
LPF
Q265 2SC2412K
Q266 2SC2412K
X261 CSA3.60MGF228
AT AM MODE
( ) AM STEREO
TUNER P.W.B. UNIT
CN101A TO MAIN PWB UNIT CN101B (9130)
D GND
+B (5V)
PLL STRO
PLL CE
CLK
PLL DATA
STOP IN
L/DX
TU MUTE
CN102A TO MAIN PWB UNIT CN102B (9110)
R OUT
A GND
L OUT
SD
STEREO IN
AUTO/MONO
A GND
AM STEREO
(+B (12V)
RDS START
RDS DATA
RDS RES
TO MAIN P.W.B UNIT P6104
CN104
CN104A TO MAIN P.W.B UNIT CN104B
TO MAIN P.W.B CN103B
CN103A
FL601
D606 SPR-505MVW
D607 SPR-505MVW
D608 SPR-505MVW
TA
PTY
RT
RED
GREEN
S601 POWER
S602 DISP
S603 TIMER
S604 BAND
S605 MONO/ST
S606 DOWN
S607 FUNC
S608 UP
S609 MEMO
Disp P.W.B. Unit
FM MODE
( ) AM MODE
☐ FOR E2 DEST. ONLY
+B
AM
FM

R113	C232
2.7K	☒
390	☒
2.7K	☒
220	○

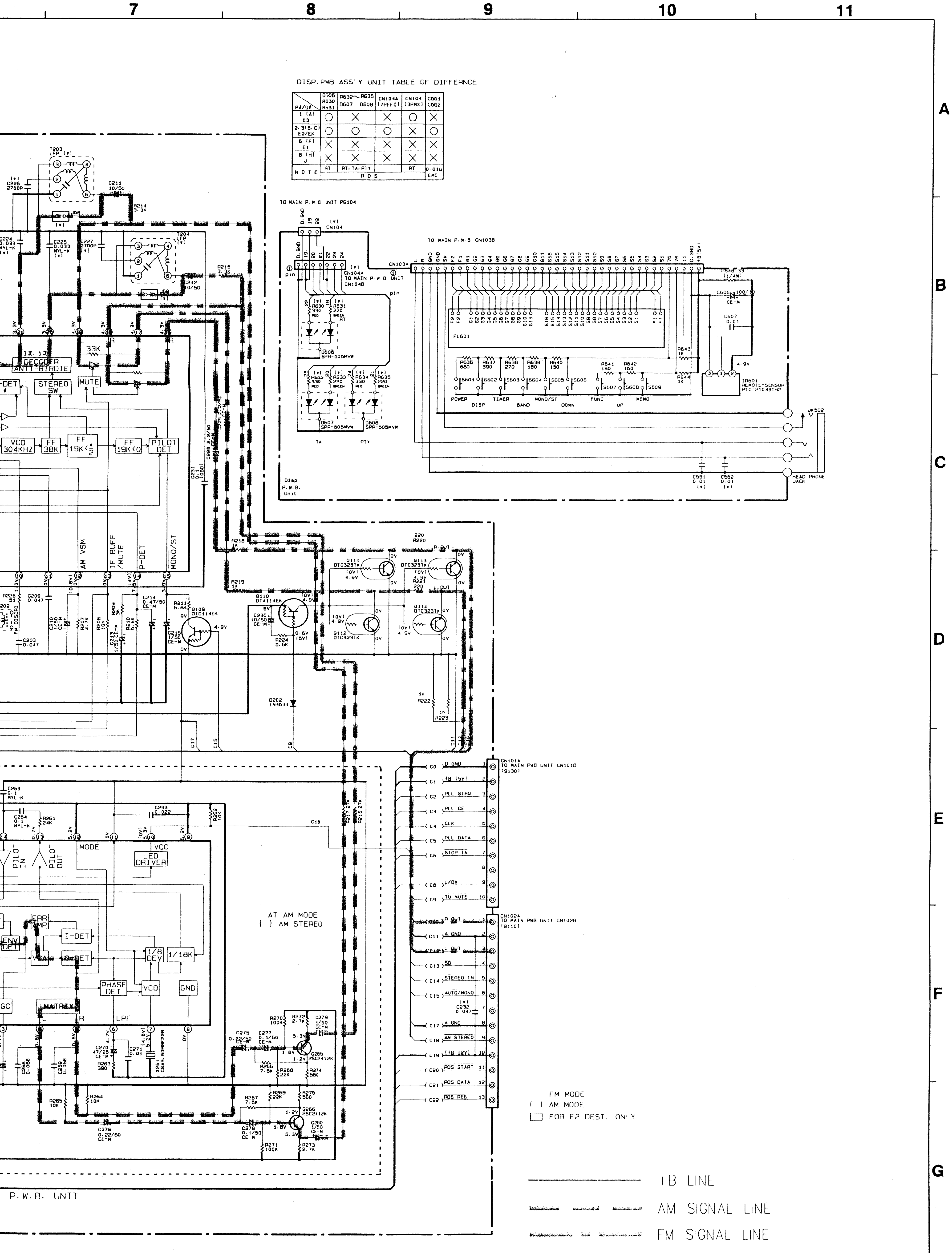
DISP.PWB ASS'Y UNIT TABLE OF DIFFERNCE

P#/D#	D606 R530 R531	R632～R635 D607 D608	CN104A (7PFFC)	CN104 (3PMX)	C551 C552
1 (A) E3	○	☒	☒	○	☒
2. 3(B. C) E2/EK	○	○	○	☒	○
6 (F) E1	☒	☒	☒	☒	☒
8 (H) J	☒	☒	☒	☒	☒
N O T E	RT R D S	RT, TA, PTY		RT	0.01u EMC

th this symbol ⚠ ▨ have critical characteristics.
ement parts recommended by the manufacturer.

the unit to the customer, make sure you make either (1) a
check or (2) a line to chassis resistance check. If the leakage
0.5 milliamps, or if the resistance from chassis to either side
rd is less than 460 kohms, the unit is detective.

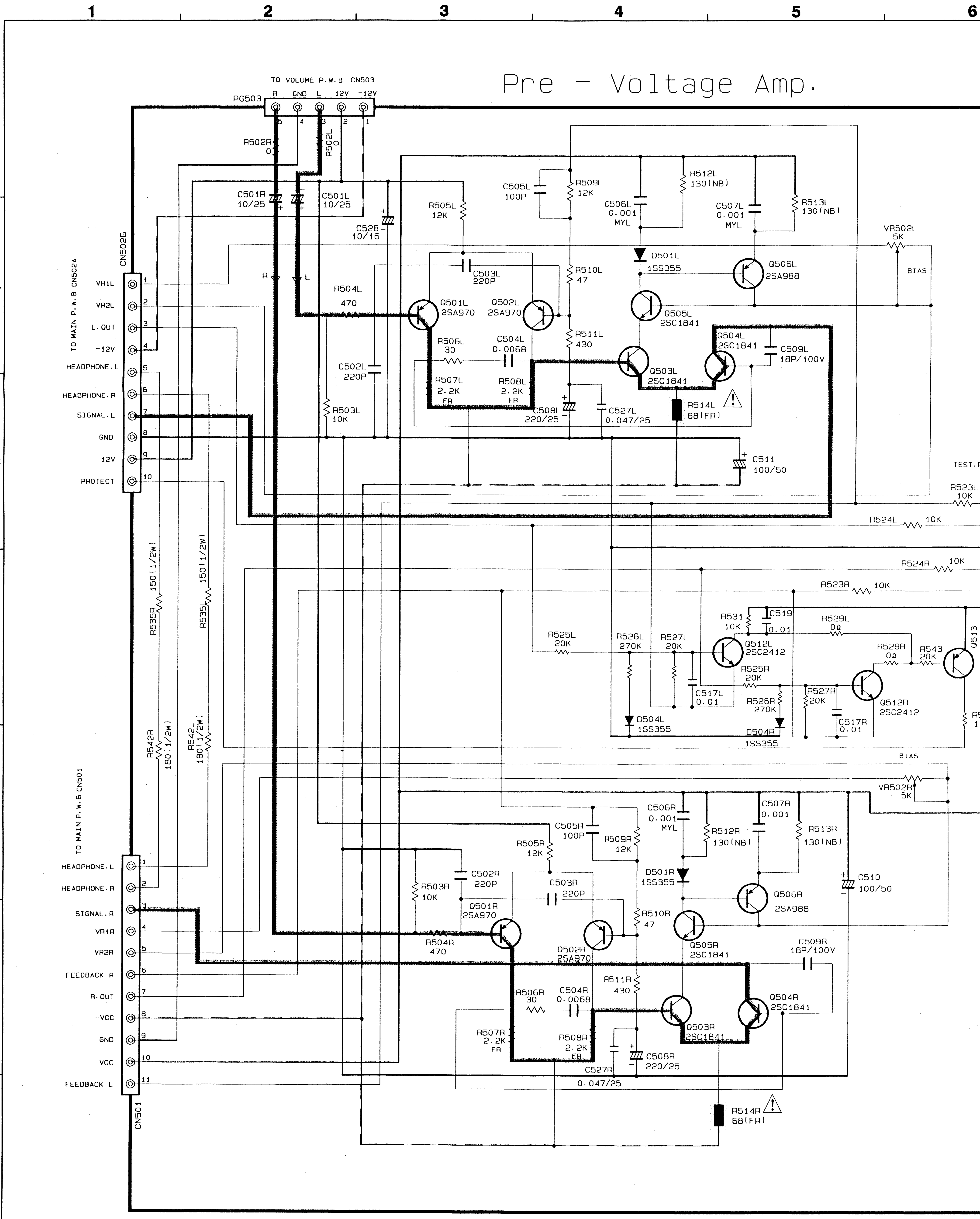
he unit to the customer until the problem is located and


7
8
9
10
11
A
B
C
D
E
F
G
H
TO MAIN P.W.B UNIT P6104
CN104
CN104A
TO MAIN P.W.B UNIT
CN104B
TO MAIN P.W.B CN103B
CN103A
FL601
R636 680
R637 390
R638 270
R639 180
R640 150
R641 180
R642 150
R643 1K
R644 1K
R648 33 (1/4W)
C606 100/10 CE-M
C607 0.01
IR601 REMOTE-SENSOR PIC-21043TM2
S601 S602 S603 S604 S605 S606 S607 S608 S609
POWER
DISP
TIMER
BAND
MONO/ST
DOWN
FUNC
UP
MEMO
JK502
HEAD PHONE JACK
C551 0.01
C552 0.01
D606 SPR-505MVW
D607 SPR-505MVW
D608 SPR-505MVW
TA
PTY
Disp P.W.B. Unit
DECODER
ANTI-BIRDIE
STEREO SW
MUTE
VCO 304KHZ
FF 38K
FF 19K
FF 19K
PILOT DET
AM VSM
IF BUFF /MUTE
P-DET
MONO/ST
Q109 DTC114EK
Q110 DTA114EK
Q111 DTC323TK
Q112 DTC323TK
Q113 DTC323TK
Q114 DTC323TK
D202 1N4531
R222 1K
R223 1K
PILOT IN
PILOT OUT
MODE
VCC
LED DRIVER
ERR AMP
I-DET
Q-DET
1/8 DEV
1/18K
PHASE DET
VCO
GND
MATRIX
LPF
AT AM MODE
( ) AM STEREO
Q265 2SC2412K
Q266 2SC2412K
CN101A
TO MAIN PWB UNIT CN101B (9130)
C0 D GND 1
C1 +B (5V) 2
C2 PLL STRO 3
C3 PLL CE 4
C4 CLK 5
C5 PLL DATA 6
C6 STOP IN 7
8
C8 L/DX 9
C9 TU MUTE 10
CN102A
TO MAIN PWB UNIT CN102B (9110)
(C10) R OUT 1
C11 A GND 2
(C12) L OUT 3
C13 SD 4
C14 STEREO IN 5
C15 AUTO/MONO 6
C232 0.047 7
C17 A GND 8
C18 AM STEREO 9
C19 (+B (12V)) 10
C20 RDS START 11
C21 RDS DATA 12
C22 RDS RES 13
FM MODE
( ) AM MODE
FOR E2 DEST. ONLY
P.W.B. UNIT
+B LINE
AM SIGNAL LINE
FM SIGNAL LINE

DISP. PWB ASS'Y UNIT TABLE OF DIFFERNCE

P#/D#	D606 R530 R531	R632～R635 D607 D608	CN104A (7PFFC)	CN104 (3PMX)	C551 C552
1 (A) E3	○	×	×	○	×
2, 3(B, C) E2/EK	○	○	○	×	○
6 (F) E1	×	×	×	×	×
8 (H) J	×	×	×	×	×
N O T E	AT	AT, TA, PTY		AT	0.01u EMC
	R D S				

SCHEMATIC DIAGRAMS (2/3)


1
2
3
4
5
6
A
B
C
D
E
F
G
Pre - Voltage Amp.
TO VOLUME P.W.B CN503
R GND L 12V -12V
PG503
5 4 3 2 1
R502R 0
R502L 0
C501R 10/25
C501L 10/25
C528 10/16
R L
CN502B
TO MAIN P.W.B CN502A
VR1L
VR2L
L.OUT
-12V
HEADPHONE.L
HEADPHONE.R
SIGNAL.L
GND
12V
PROTECT
R505L 12K
C505L 100P
R509L 12K
C506L 0.001 MYL
R512L 130(NB)
C507L 0.001 MYL
R513L 130(NB)
VR502L 5K
BIAS
C503L 220P
R504L 470
Q501L 2SA970
Q502L 2SA970
R510L 47
D501L 1SS355
Q506L 2SA988
Q505L 2SC1841
R506L 30
C504L 0.0068
R511L 430
Q504L 2SC1841
C509L 18P/100V
C502L 220P
R507L 2.2K FR
R508L 2.2K FR
Q503L 2SC1841
R503L 10K
C508L 220/25
C527L 0.047/25
R514L 68(FR)
C511 100/50
TEST.P
R523L 10K
R524L 10K
R524R 10K
R523R 10K
R535R 150(1/2W)
R535L 150(1/2W)
R531 10K
C519 0.01
R529L 0Ω
Q513
R525L 20K
R526L 270K
R527L 20K
Q512L 2SC2412
R529R 0Ω
R543 20K
R525R 20K
C517L 0.01
R526R 270K
R527R 20K
Q512R 2SC2412
D504L 1SS355
D504R 1SS355
C517R 0.01
R542R 180(1/2W)
R542L 180(1/2W)
BIAS
VR502R 5K
TO MAIN P.W.B CN501
C506R 0.001 MYL
C507R 0.001
C505R 100P
R512R 130(NB)
R513R 130(NB)
R505R 12K
R509R 12K
D501R 1SS355
C510 100/50
HEADPHONE.L
HEADPHONE.R
SIGNAL.R
VR1R
VR2R
FEEDBACK R
R.OUT
-VCC
GND
VCC
FEEDBACK L
C502R 220P
C503R 220P
R503R 10K
Q501R 2SA970
Q506R 2SA988
R510R 47
R504R 470
Q502R 2SA970
Q505R 2SC1841
C509R 18P/100V
R511R 430
R506R 30
C504R 0.0068
Q504R 2SC1841
R507R 2.2K FR
R508R 2.2K FR
Q503R 2SC1841
C508R 220/25
C527R 0.047/25
R514R 68(FR)
CN501

H

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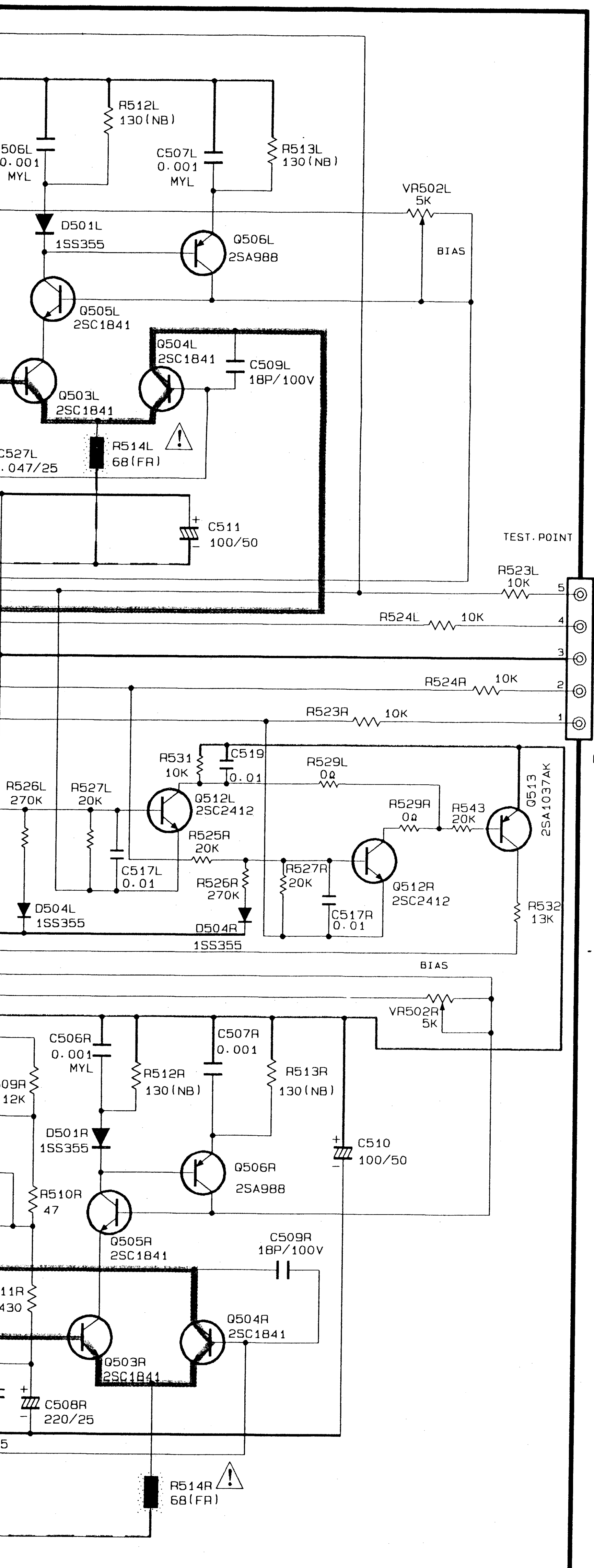
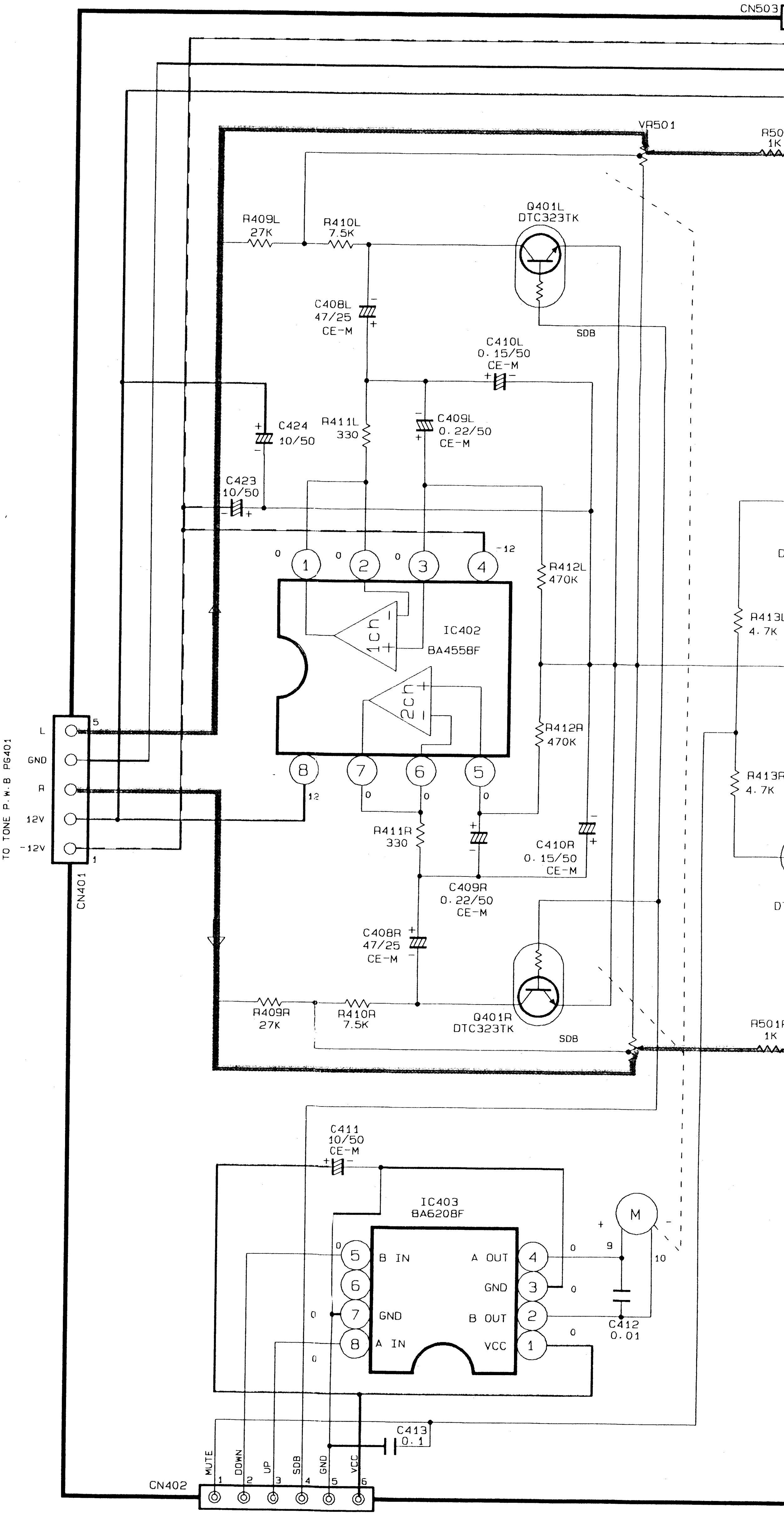
Voltage Amp.


4
5
6
R512L 130(NB)
506L 0.001 MYL
C507L 0.001 MYL
R513L 130(NB)
VR502L 5K
BIAS
D501L 1SS355
Q506L 2SA988
Q505L 2SC1841
Q504L 2SC1841
C509L 18P/100V
Q503L 2SC1841
C527L .047/25
R514L 68(FR)
C511 100/50
TEST.POINT
R523L 10K
R524L 10K
R524R 10K
R523R 10K
L+
L-
GND
R-
R+
PG502
R531 10K
C519 0.01
R529L 0Ω
R526L 270K
R527L 20K
Q512L 2SC2412
R529R 0Ω
R543 20K
Q513 2SA1037AK
R525R 20K
C517L 0.01
R526R 270K
R527R 20K
C517R 0.01
Q512R 2SC2412
R532 13K
D504L 1SS355
D504R 1SS355
BIAS
VR502R 5K
C506R 0.001 MYL
C507R 0.001
R512R 130(NB)
R513R 130(NB)
09R 12K
D501R 1SS355
C510 100/50
Q506R 2SA988
R510R 47
Q505R 2SC1841
C509R 18P/100V
11R 430
Q504R 2SC1841
Q503R 2SC1841
C508R 220/25
R514R 68(FR)

Volume Control

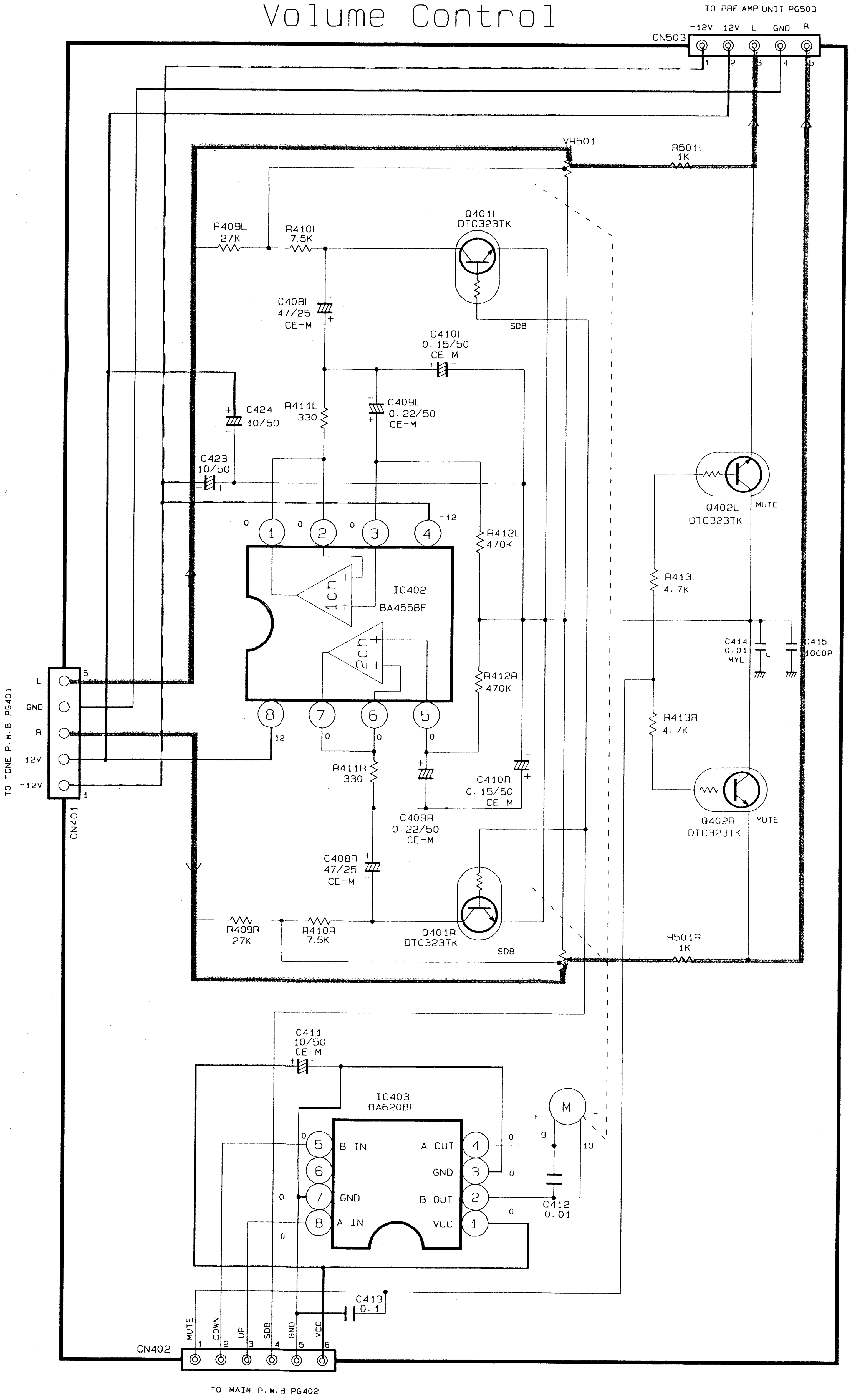

7
8
9
CN503
VR501
R50 1K
R409L 27K
R410L 7.5K
Q401L DTC323TK
C408L 47/25 CE-M
SDB
C410L 0.15/50 CE-M
C424 10/50
R411L 330
C409L 0.22/50 CE-M
C423 10/50
0
0
0
-12
1
2
3
4
R412L 470K
IC402 BA4558F
1ch
2ch
R413L 4.7K
R412R 470K
8
7
6
5
12
0
0
0
R413R 4.7K
L
GND
R
12V
-12V
TO TONE P.W.B PG401
CN401
R411R 330
C410R 0.15/50 CE-M
C409R 0.22/50 CE-M
C408R 47/25 CE-M
R409R 27K
R410R 7.5K
Q401R DTC323TK
SDB
R501R 1K
C411 10/50 CE-M
IC403 BA6208F
B IN
A OUT
GND
GND
B OUT
A IN
VCC
M
9
10
C412 0.01
C413 0.1
MUTE
DOWN
UP
SDB
GND
VCC
CN402
TO MAIN P.W.B PG402

this symbol ⚠ ▨ have critical characteristics.
nent parts recommended by the manufacturer.

e unit to the customer, make sure you make either (1) a
eck or (2) a line to chassis resistance check. If the leakage
5 milliamps, or if the resistance from chassis to either side
is less than 460 kohms, the unit is defective.

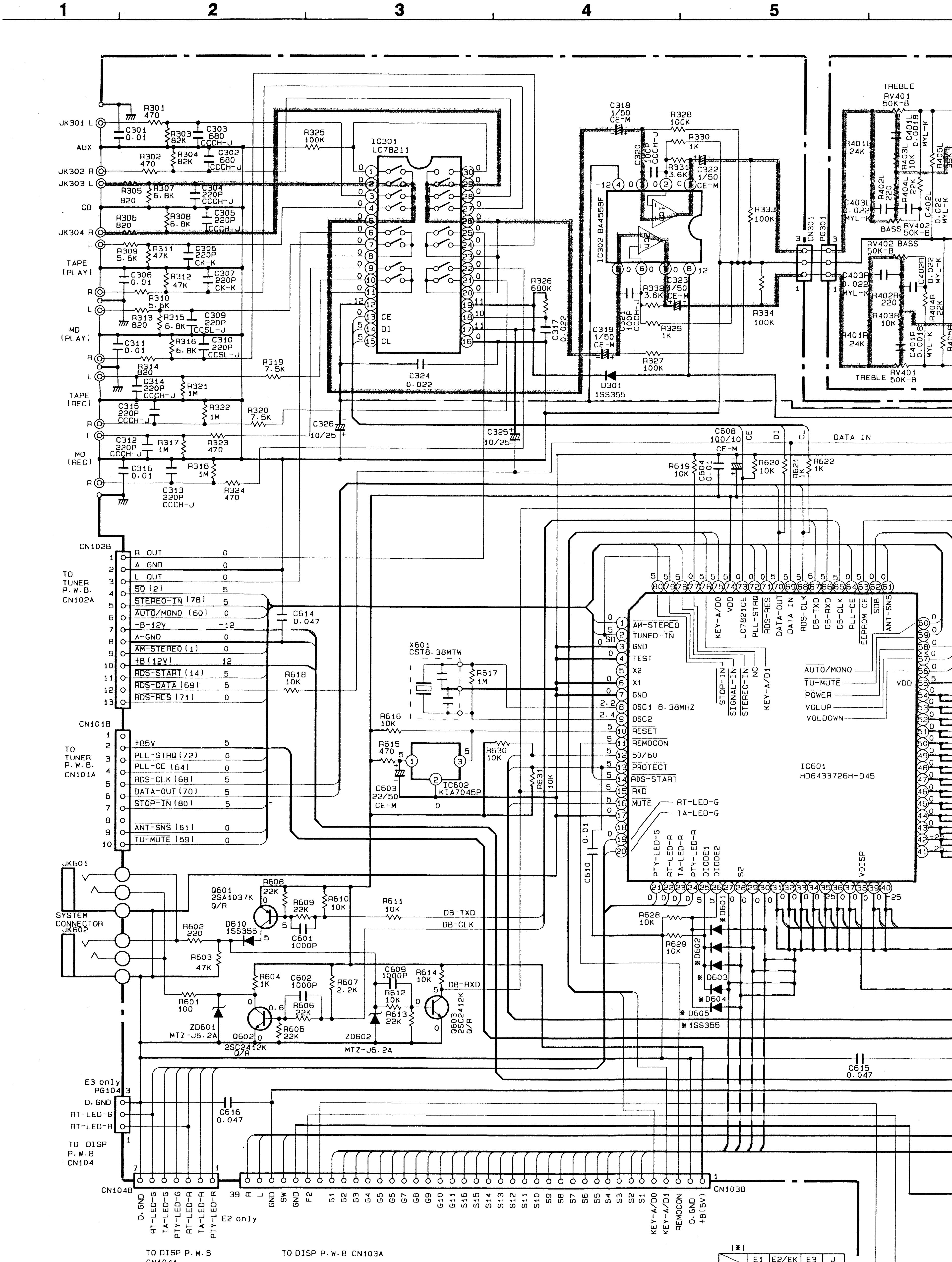
unit to the customer until the problem is located and

Volume Control


TO PRE AMP UNIT PG503
-12V 12V L GND R
CN503
1 2 3 4 5
VR501
R501L
1K
R409L
27K
R410L
7.5K
Q401L
DTC323TK
C408L
47/25
CE-M
SDB
C410L
0.15/50
CE-M
C424
10/50
R411L
330
C409L
0.22/50
CE-M
C423
10/50
0 0 0 -12
1 2 3 4
R412L
470K
IC402
BA4558F
1ch
2ch
Q402L
DTC323TK
MUTE
R413L
4.7K
C414
0.01
MYL
C415
1000P
R412R
470K
R413R
4.7K
L
GND
R
12V
-12V
5
1
TO TONE P.W.B PG401
CN401
8 7 6 5
12 0 0 0
R411R
330
C410R
0.15/50
CE-M
C409R
0.22/50
CE-M
Q402R
DTC323TK
MUTE
C408R
47/25
CE-M
R409R
27K
R410R
7.5K
Q401R
DTC323TK
SDB
R501R
1K
C411
10/50
CE-M
IC403
BA6208F
M
0 9 10
5 B IN
6
7 GND
8 A IN
A OUT 4
GND 3
B OUT 2
VCC 1
0 0 0 0 0
C412
0.01
C413
0.1
MUTE DOWN UP SDB GND VCC
1 2 3 4 5 6
CN402
TO MAIN P.W.B PG402

──── +B LINE
— — — — −B LINE
▬▬▬▬ SIGNAL LINE

SCHEMATIC DIAGRAMS (3/3)


1
2
3
4
5
JK301 L
AUX
JK302 R
JK303 L
CD
JK304 R
TAPE (PLAY)
MD (PLAY)
TAPE (REC)
MD (REC)
IC301 LC78211
IC302 BA4558F
CN301
PG301
TREBLE RV401 50K-B
BASS RV402 50K-B
D301 1SS355
DATA IN
CN102B
TO TUNER P.W.B. CN102A
R OUT
A GND
L OUT
SD (2)
STEREO-IN (78)
AUTO/MONO (60)
-B-12V
A-GND
AM-STEREO (1)
+B (12V)
RDS-START (14)
RDS-DATA (69)
RDS-RES (71)
CN101B
TO TUNER P.W.B. CN101A
+B5V
PLL-STRQ (72)
PLL-CE (64)
RDS-CLK (68)
DATA-OUT (70)
STOP-IN (80)
ANT-SNS (61)
TU-MUTE (59)
X601 CST8.38MTW
IC602 KIA7045P
IC601 HD6433726H-D45
JK601
SYSTEM CONNECTOR JK602
Q601 2SA1037K Q/R
Q602 2SC2412K Q/R
Q603 2SC2412K Q/R
ZD601 MTZ-J6.2A
ZD602 MTZ-J6.2A
D610 1SS355
DB-TXD
DB-CLK
DB-RXD
* 1SS355
E3 only PG104
D.GND
RT-LED-G
RT-LED-R
TO DISP P.W.B CN104
CN104B
CN103B
E2 only
TO DISP P.W.B CN104A
TO DISP P.W.B CN103A

(*)

	E1	E2/EK	E3	J
D601	X	X	X	○
D602	○	X	○	○
D603	○	○	X	X
D604	X	X	X	○
D605	X	○	○	X
D011	○	○	X	X
D012	○	○	X	X

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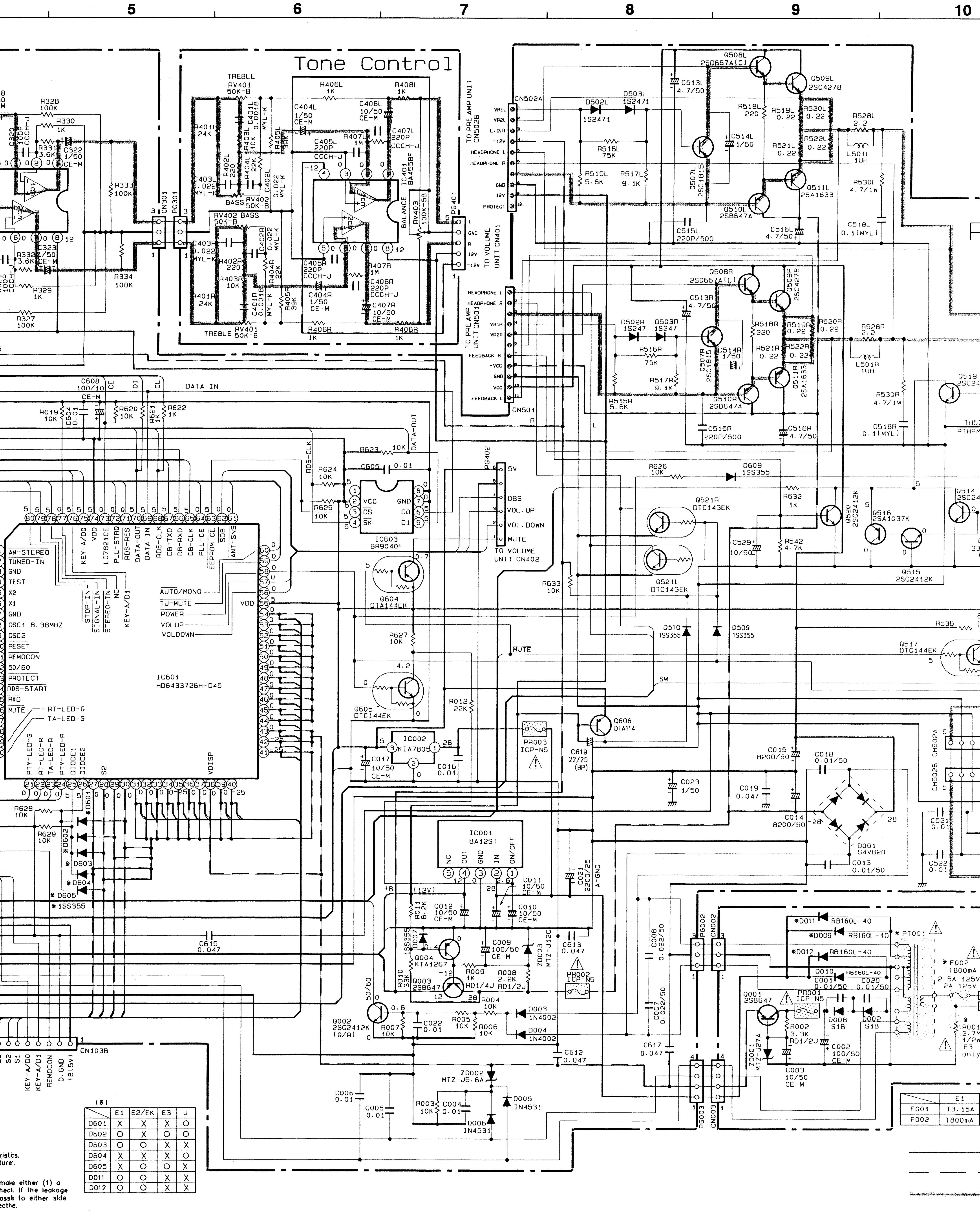

5
6
7
8
9
10
Tone Control
TREBLE RV401 50K-B
BASS RV402 50K-B
RV402 BASS 50K-B
TREBLE RV401 50K-B
IC401 BA455BF
BALANCE RV403 100K-5B
CN301
PG301
PG401
TO VOLUME UNIT CN401
CN502A
TO PRE AMP UNIT CN502B
VR1L
VR2L
L.OUT
-12V
HEADPHONE L
HEADPHONE R
GND
12V
PROTECT
CN501
TO PRE AMP UNIT CN501
HEADPHONE L
HEADPHONE R
VR1R
VR2R
FEEDBACK R
-VCC
GND
VCC
FEEDBACK L
Q508L 2SD667A(C)
Q509L 2SC4278
Q507L 2SC1815
Q510L 2SB647A
Q511L 2SA1633
Q508R 2SD667A(C)
Q509R 2SC4278
Q507R 2SC1815
Q510R 2SB647A
Q511R 2SA1633
D502L 1S2471
D503L 1S2471
D502R 1S247
D503R 1S247
L501L 1UH
L501R 1UH
Q519 2SC24
TH50 PTHPM
IC601 HD6433726H-D45
AM-STEREO
TUNED-IN
GND
TEST
X2
X1
GND
OSC1 8.38MHZ
OSC2
RESET
REMOCON
50/60
PROTECT
RDS-START
RXD
MUTE
RT-LED-G
TA-LED-G
PTY-LED-G
RT-LED-R
TA-LED-R
PTY-LED-R
DIODE1
DIODE2
S2
VDISP
KEY-A/D0
VDD
LC7821CE
PLL-STRO
RDS-RES
DATA-OUT
DATA IN
RDS-CLK
DB-TXD
DB-RXD
DB-CLK
PLL-CE
EEPROM CE
SDB
ANT-SNS
STOP-IN
SIGNAL-IN
STEREO-IN
NC
KEY-A/D1
AUTO/MONO
TU-MUTE
POWER
VOLUP
VOLDOWN
VDD
DATA IN
IC603 BR9040F
PG402
5V
DBS
VOL.UP
VOL.DOWN
MUTE
TO VOLUME UNIT CN402
Q604 DTA144EK
Q605 DTC144EK
Q606 DTA114
Q521R DTC143EK
Q521L DTC143EK
Q520 2SC2412K
Q516 2SA1037K
Q515 2SC2412K
Q514 2SC24
Q517 DTC144EK
D609 1SS355
D510 1SS355
D509 1SS355
MUTE
SW
IC002 KIA7805
PR003 ICP-N5
IC001 BA12ST
NC OUT GND IN ON/OFF
Q004 KTA1267
Q003 2SB647
Q002 2SC2412K (Q/A)
ZD003 MTZ-J12C
ZD002 MTZ-J5.6A
D003 1N4002
D004 1N4002
D005 IN4531
D006 IN4531
PR002 ICP-N5
D001 S4VB20
PG002
CN002
PG003
CN003
CN502A
CN502B
D011 RB160L-40
D009 RB160L-40
D012 RB160L-40
D010 RB160L-40
PT001
F002 T800mA 2.5A 125V 2A 125V
Q001 2SB647
PR001 ICP-N5
ZD001 MTZ-J27A
D008 S1B
D002 S1B
R001 2.7M 1/2W E3 only
CN103B
S2
S1
KEY-A/D0
KEY-A/D1
REMOCON
D.GND
+B(5V)
D601
D602
D603
D604
D605
1SS355

(*)

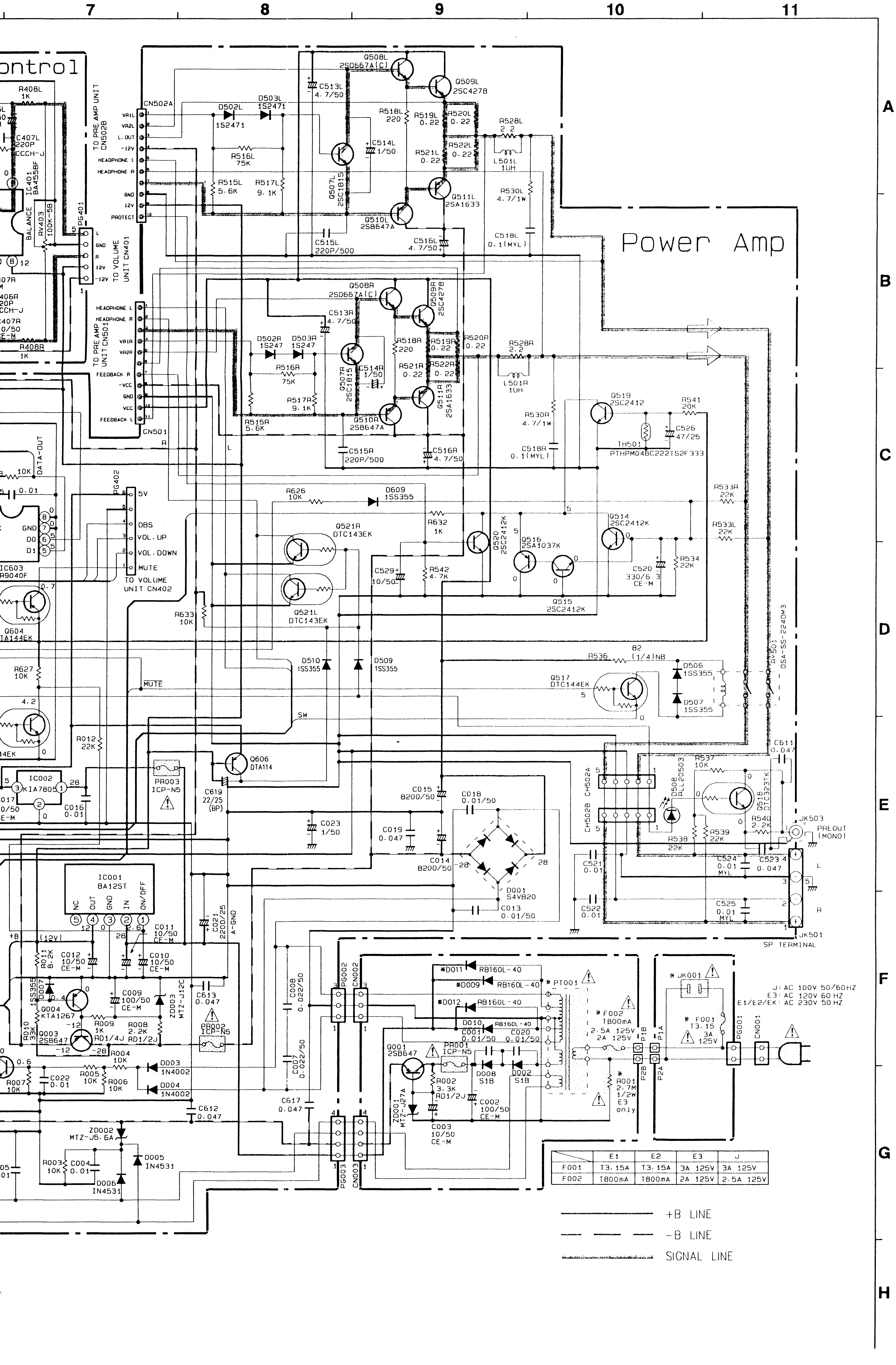
	E1	E2/EK	E3	J
D601	X	X	X	○
D602	○	X	○	○
D603	○	○	X	X
D604	X	X	X	○
D605	X	○	○	X
D011	○	○	X	X
D012	○	○	X	X

	E1
F001	T3.15A
F002	T800mA

ristics.
ture'.

make either (1) a
heck. If the leakage
assis to either side
ective.

is located and


7
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11
A
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C
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ontrol
Power Amp
CN502A
CN501
TO PRE AMP UNIT CN502B
TO PRE AMP UNIT CN501
TO VOLUME UNIT CN401
TO VOLUME UNIT CN402
PG401
PG402
VR1L
VR2L
L.OUT
-12V
HEADPHONE L
HEADPHONE R
GND
12V
PROTECT
VR1R
VR2R
FEEDBACK R
-VCC
VCC
FEEDBACK L
5V
DBS
VOL.UP
VOL.DOWN
MUTE
Q508L 2SD667A(C)
Q509L 2SC4278
Q507L 2SC1815
Q510L 2SB647A
Q511L 2SA1633
Q508R 2SD667A(C)
Q509R 2SC4278
Q507R 2SC1815
Q510R 2SB647A
Q511R 2SA1633
D502L 1S2471
D503L 1S2471
D502R 1S247
D503R 1S247
C513L 4.7/50
C514L 1/50
C515L 220P/500
C516L 4.7/50
C513R 4.7/50
C514R 1/50
C515R 220P/500
C516R 4.7/50
R515L 5.6K
R516L 75K
R517L 9.1K
R518L 220
R519L 0.22
R520L 0.22
R521L 0.22
R522L 0.22
R528L 2.2
L501L 1UH
R530L 4.7/1W
C518L 0.1(MYL)
R515R 5.6K
R516R 75K
R517R 9.1K
R518R 220
R519R 0.22
R520R 0.22
R521R 0.22
R522R 0.22
R528R 2.2
L501R 1UH
R530R 4.7/1W
C518R 0.1(MYL)
Q519 2SC2412
R541 20K
C526 47/25
TH501 PTHPM04BC222TS2F333
R533R 22K
R533L 22K
R626 10K
D609 1SS355
R632 1K
Q521R DTC143EK
Q521L DTC143EK
Q520 2SC2412K
Q516 2SA1037K
Q514 2SC2412K
Q515 2SC2412K
C529 10/50
R542 4.7K
C520 330/6.3 CE-M
R534 22K
R633 10K
D510 1SS355
D509 1SS355
R536 82 (1/4)NB
D506 1SS355
D507 1SS355
Q517 DTC144EK
RY501 OSA-SS-224DM3
MUTE
SW
Q606 DTA114
C619 22/25 (BP)
PR003 ICP-N5
IC002 KIA7805
C016 0.01
C015 8200/50
C018 0.01/50
C019 0.047
C023 1/50
C014 8200/50
D001 S4VB20
C013 0.01/50
C021 2200/25
A-GND
IC001 BA12ST
NC
OUT
GND
IN
ON/OFF
C011 10/50 CE-M
C010 10/50 CE-M
C012 10/50 CE-M
R011 8.2K
Q004 KTA1267
C009 100/50 CE-M
ZD003 MTZ-J12C
C613 0.047
PR002 ICP-N5
R009 1K
R008 2.2K RD1/2J
Q003 2SB647
R010 33K
D007 1SS355
R004 10K
R005 10K
R006 10K
D003 1N4002
D004 1N4002
C022 0.01
R007 10K
C612 0.047
ZD002 MTZ-J5.6A
R003 10K
C004 0.01
D005 1N4531
D006 1N4531
C008 0.022/50
C007 0.022/50
C617 0.047
PG002
CN002
PG003
CN003
D011 RB160L-40
D009 RB160L-40
D012 RB160L-40
D010 RB160L-40
C001 0.01/50
C020 0.01/50
PT001
Q001 2SB647
PR001 ICP-N5
R002 3.3K RD1/2J
D008 S1B
D002 S1B
ZD001 MTZ-J27A
C002 100/50 CE-M
C003 10/50 CE-M
F002 T800mA 2.5A 125V 2A 125V
R001 2.7M 1/2W E3 only
P1B
P2B
P1A
P2A
JK001
F001 T3.15 3A 125V
PG001
CN001
J: AC 100V 50/60HZ
E3: AC 120V 60 HZ
E1/E2/EK: AC 230V 50 HZ
CH502A
CH502B
R537 10K
D508 RLL20503
Q518 DTC323TK
R540 2.2K
R538 22K
R539 22K
C611 0.047
C521 0.01
C522 0.01
C524 0.01 MYL
C523 0.047
C525 0.01 MYL
JK503 PREOUT (MONO)
JK501 SP TERMINAL
L
R
+B LINE
-B LINE
SIGNAL LINE

	E1	E2	E3	J
F001	T3.15A	T3.15A	3A 125V	3A 125V
F002	T800mA	T800mA	2A 125V	2.5A 125V

DISASSEMBLY

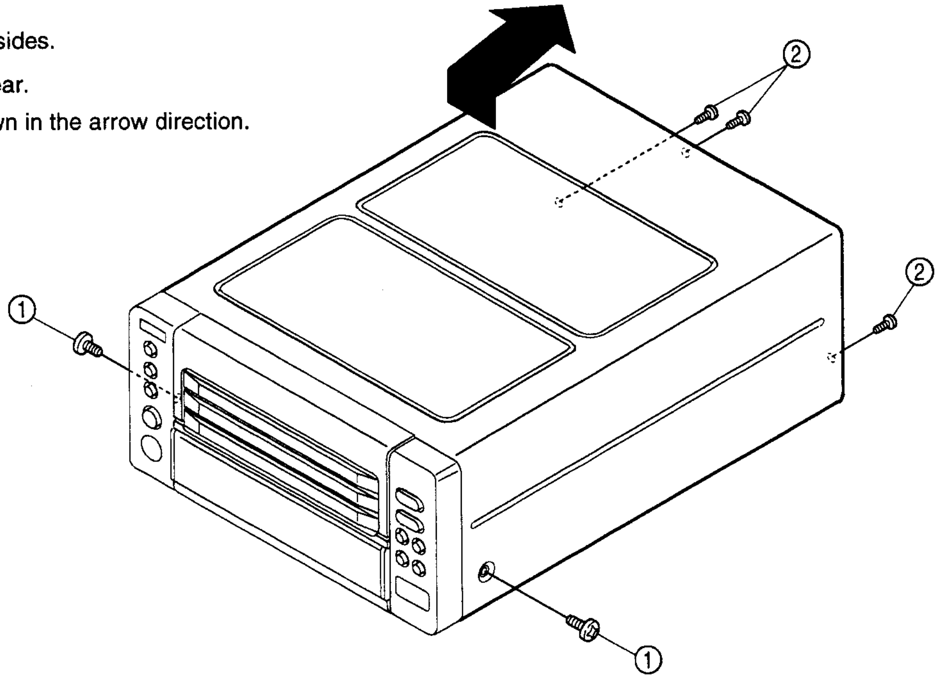
(Follow the procedure below in reverse order when reassembling)

1. Top Cover

(1) Remove 2 screws ① on both sides.

(2) Remove 3 screws ② on the rear.

(3) Detach the Top Cover as shown in the arrow direction.



2. Front Panel, FL P.W.B.

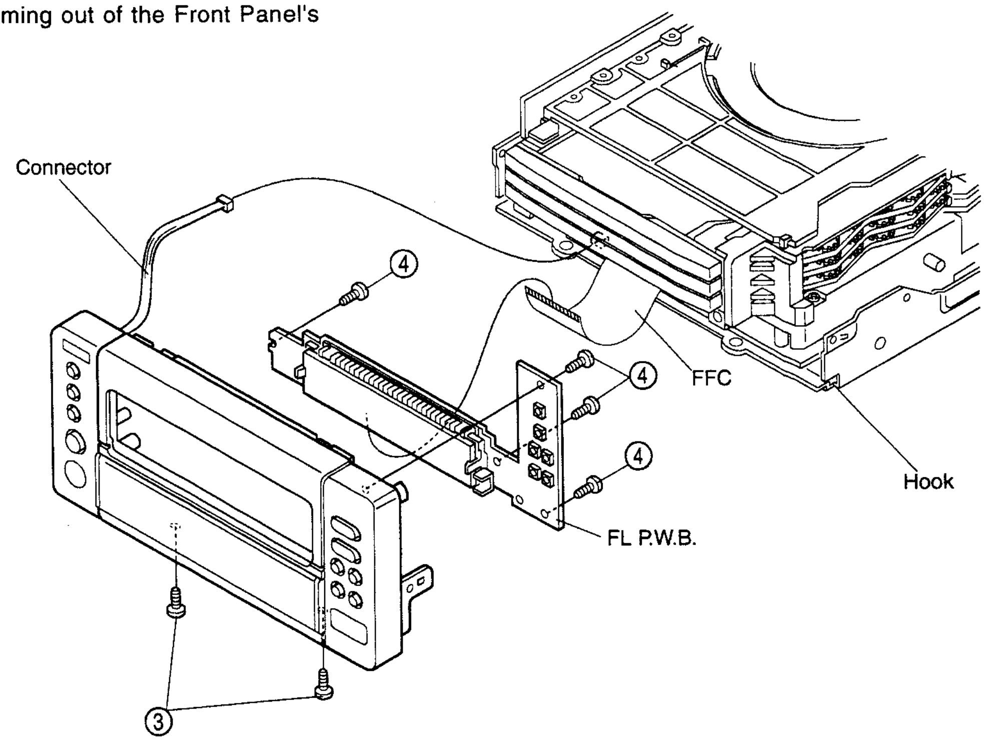
(1) Remove 2 screws ③ on the bottom edge of the Front Panel.

(2) Relese 2 hooks on both sides of the Front Panel.

(3) Detach FL P.W.B. from the Front Panel by removing 4 screws ④.

(4) Disconnect FFC from the FL P.W.B.

(5) Unplug wire connector coming out of the Front Panel's P.W.B.



CD AUTO CHANGER SECTION

3. CD Mecha. ASS'Y

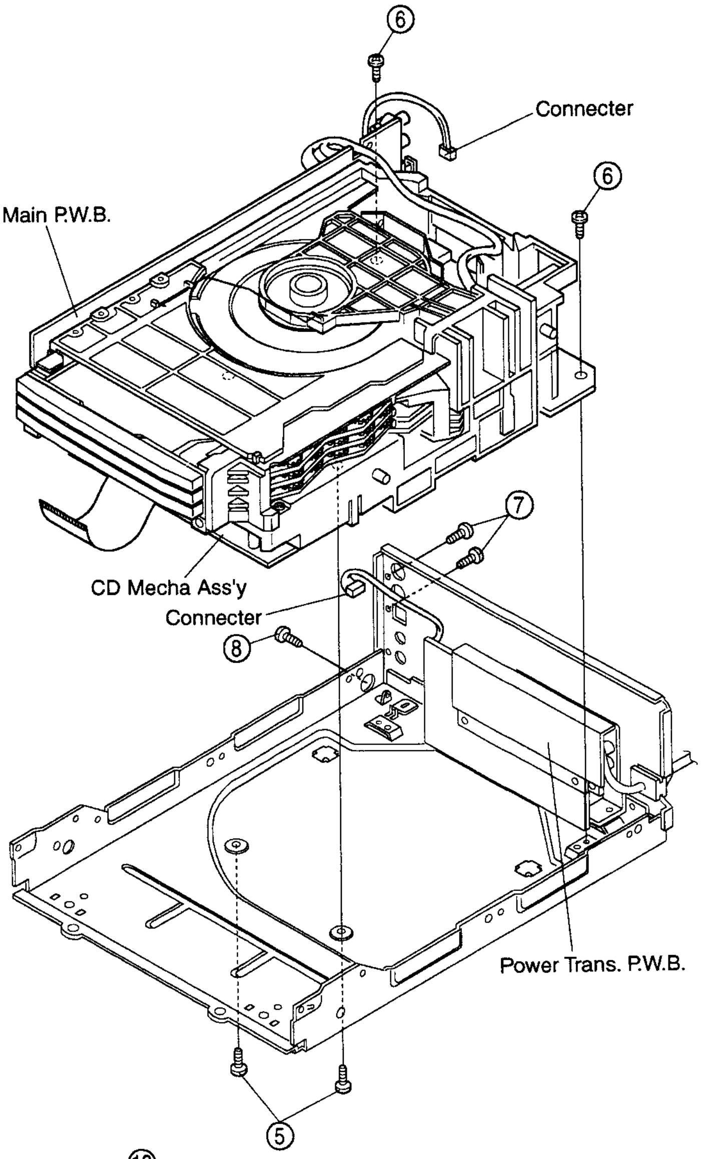
(1) Unplug wire connector coming out of Main P.W.B., and one coming out of Power Trans. P.W.B.

(2) Remove 2 screws ⑤ on the bottom of chassis.

(3) Remove 2 screws ⑥ fixing CD Mecha. Ass'y at its sides.

(4) Remove 2 screws ⑦ on the rear.

(5) Detach the CD Mecha. Ass'y after removing screw ⑧.

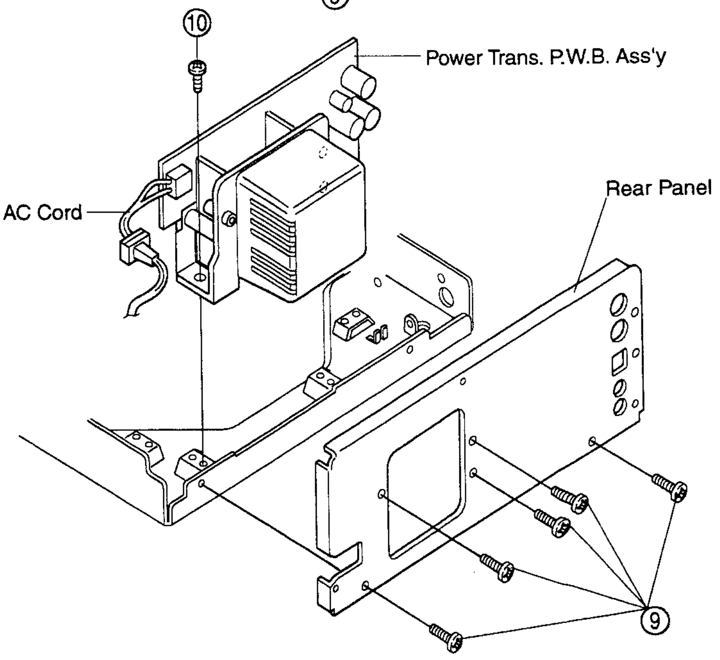

⑥
Connecter
⑥
Main P.W.B.
⑦
CD Mecha Ass'y
Connecter
⑧
Power Trans. P.W.B.
⑤

4. Power Trans. P.W.B.

(1) Remove 5 screws ⑨, on the rear.

(2) Remove AC cord on the rear.

(3) Take off the Power Trans. P.W.B. after removing screw ⑩.


⑩
Power Trans. P.W.B. Ass'y
Rear Panel
AC Cord
⑨

Mechanism Section

(Follow the procedure below in reverse order when reassembling)

1. Traverse Mecha. Ass'y

(1) Take off Top Board by removing 2 screws ①. (Fig. A)

(2) Pull up Tray Change Shaft, and remove Top, Middle and Bottom Joint Levers. (Fig. B)

(3) Lower the Traverse Mecha. by turning Main Cam or Cam Gear to the arrow direction (counterclockwise) to disengage chucking of Disc Tray, and put it in Guide Tray. (Fig. A)

(4) Pull out the Tray part with pressing the front of Change Lever as shown with the arrow A ~ C in turn from the top. (Fig. A)

(5) Turn the Main Cam or Cam Gear until it stops turning as shown in the arrow (clockwise). (Fig. B)

(6) Raise Stabilizer Holder with pressing its side hook and release the hook. (Fig. C)

(7) Turn the Main Cam or Cam Gear again to the arrow direction (clockwise), and align recesses of the Main Cam with projections of Mecha. Holder. (Fig. B, D)

(8) Pull up the Stabilizer Holder to take it off. (Fig. C)

(9) Remove screw ② to take off Mecha. Holder Guide. (Fig. C)

(10) Remove 2 screws ③ to take off Mecha. Holder Angle. (Fig. D)

(11) Pull the Traverse Mecha. Ass'y apart after checking that the projections of the Mecha. Holder correspond with the recesses of the Main Cam. (Fig. D)

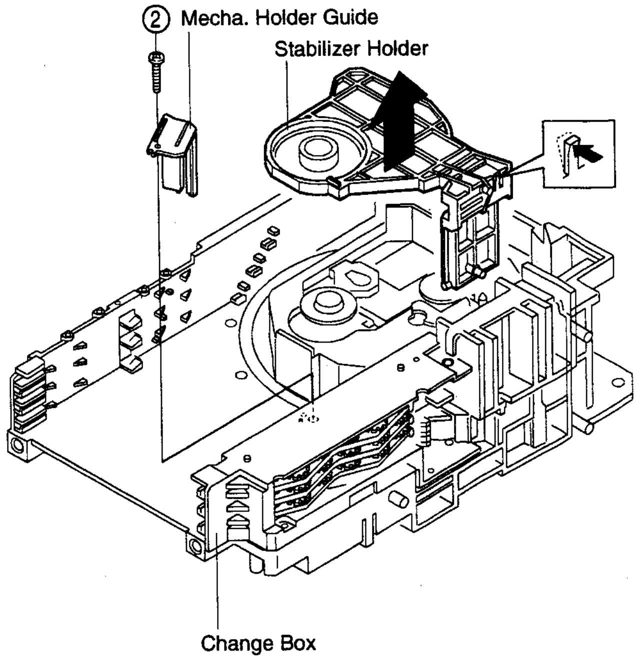

② Mecha. Holder Guide
Stabilizer Holder
Change Box

Fig. C

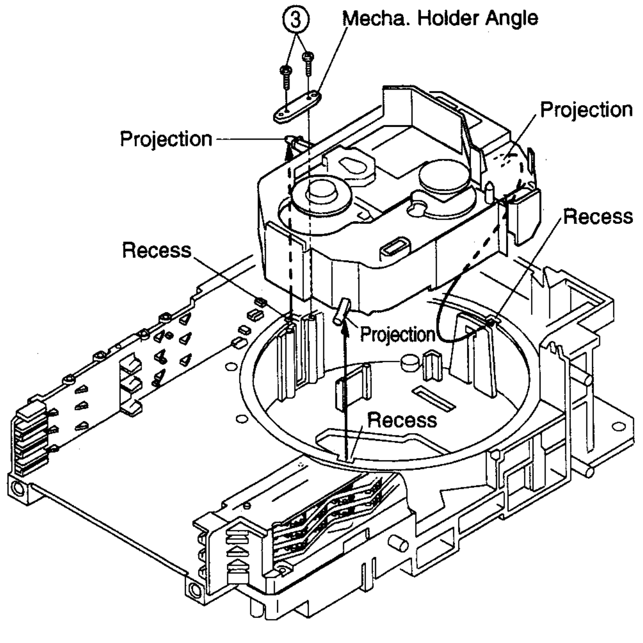

③ Mecha. Holder Angle
Projection
Projection
Recess
Recess
Projection
Recess

Fig. D

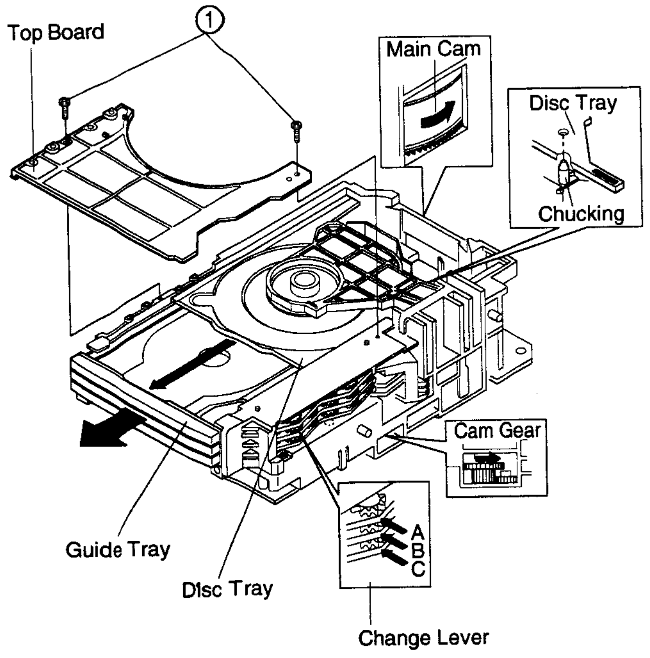

Top Board
①
Main Cam
Disc Tray
Chucking
Cam Gear
A
B
C
Guide Tray
Disc Tray
Change Lever

Fig. A

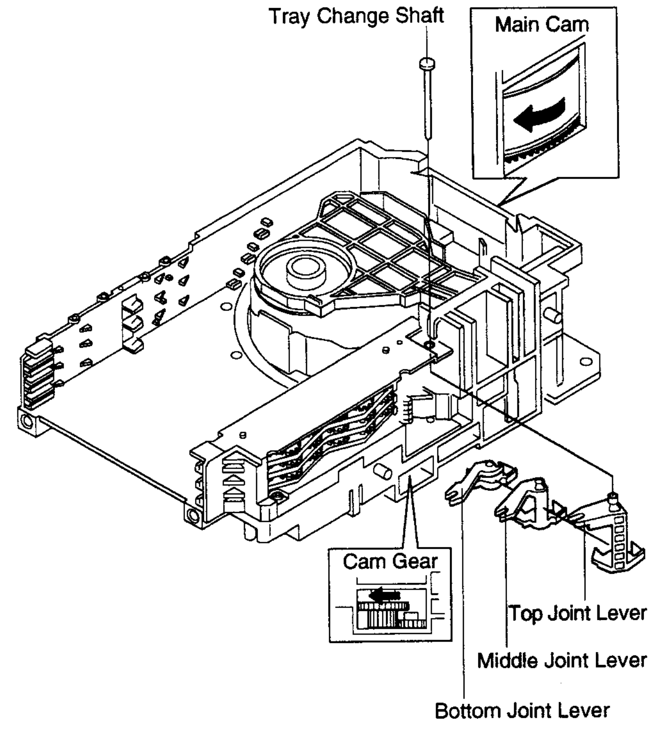

Tray Change Shaft
Main Cam
Cam Gear
Top Joint Lever
Middle Joint Lever
Bottom Joint Lever

Fig. B

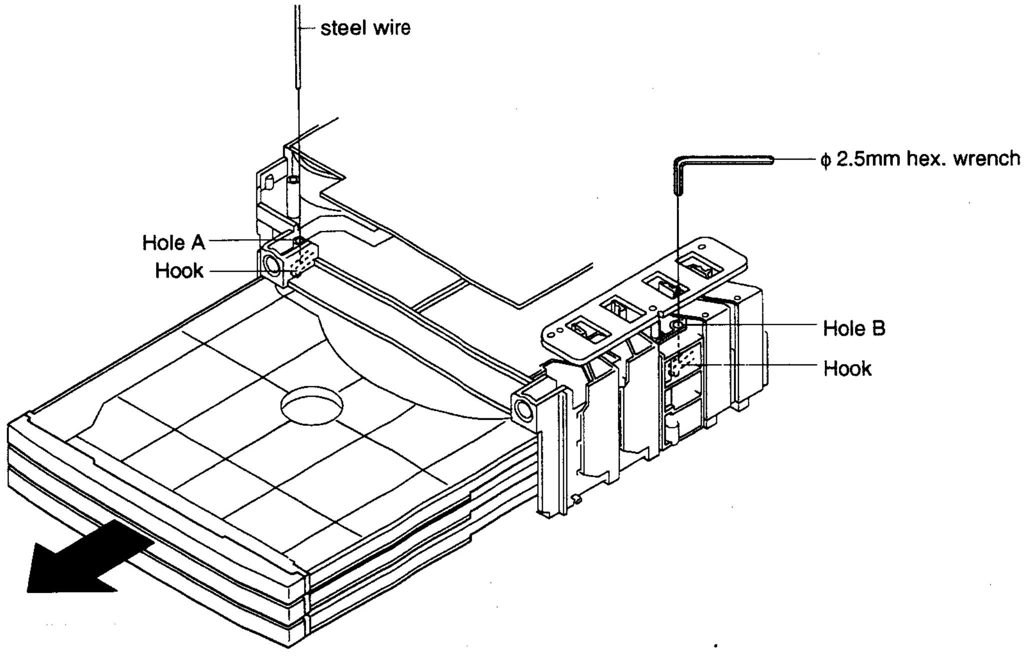
2. Tray 1 ~ 3

(1) Turn the CD Mecha. over.

(2) Insert a steel wire or eyeleteer into the hole A, and ϕ 2.5mm hex. wrench into the hole B through P.W.B. gap to release both hooks at once, then pull the Tray 3 apart as shown in fig.

* Be careful as the hooks may be broken if pushed hard.

* As to releasing the hole B hook for the Tray 1 and 2, finger pushing through side openings is possible.


steel wire
ϕ 2.5mm hex. wrench
Hole A
Hook
Hole B
Hook

CD AUTO CHANGER SECTION

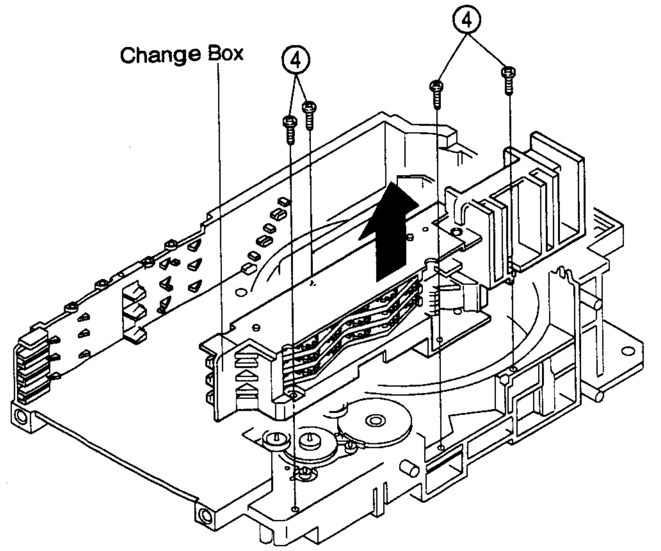
3. Change Box

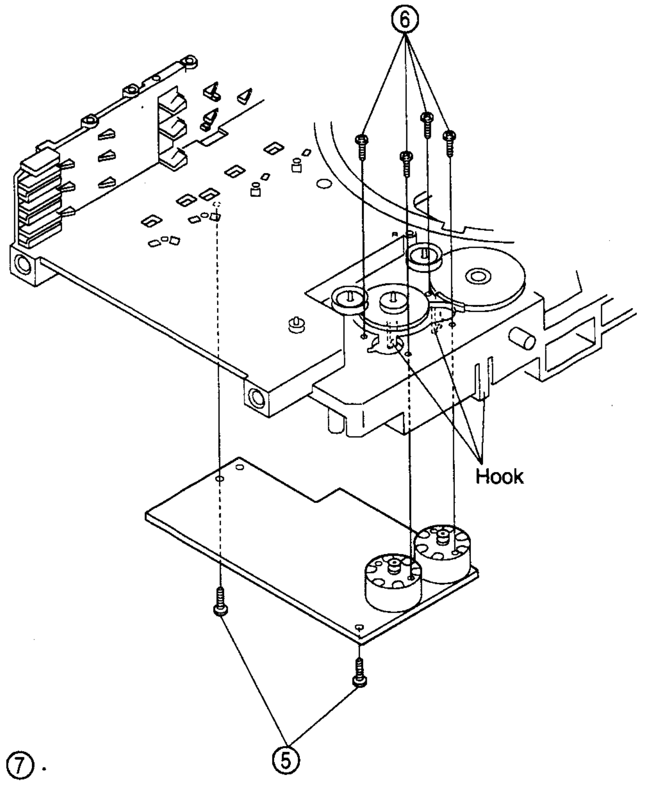
Remove 4 screws ④ and pull up the Change Box.

4. Motor P.W.B.

(1) Remove 2 screws ⑤ from the P.W.B.

(2) Detach the P.W.B. by removing 4 screws ⑥ and 3 hooks.


Change Box
④
④

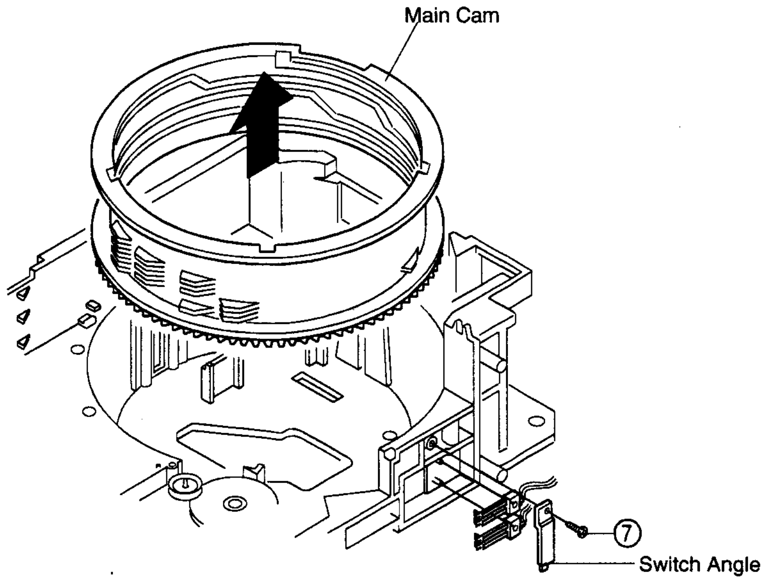


5. Main Cam

(1) Take off Switch Angle and Cam Switch by removing screw ⑦.

(2) Pull the Main Cam apart in the arrow direction.

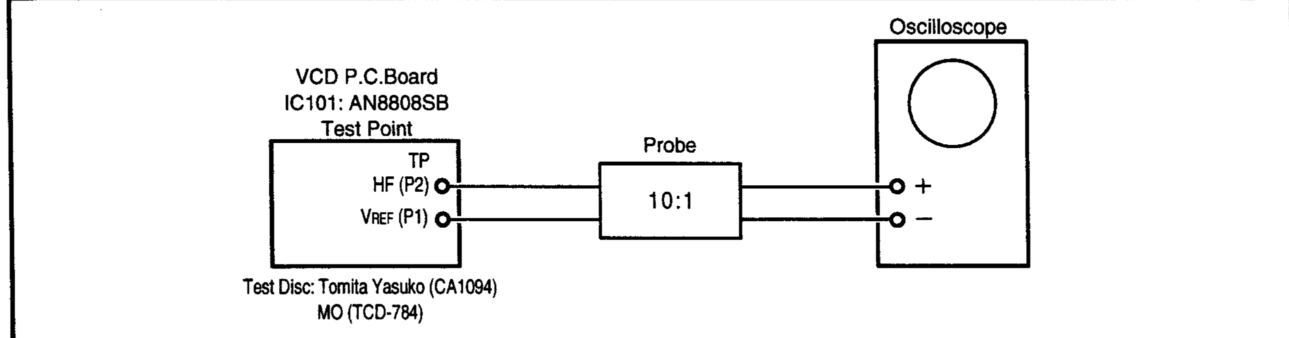
* Cord colors of the Switch Angle are red, brown, orange, green, yellow and blue from the top.

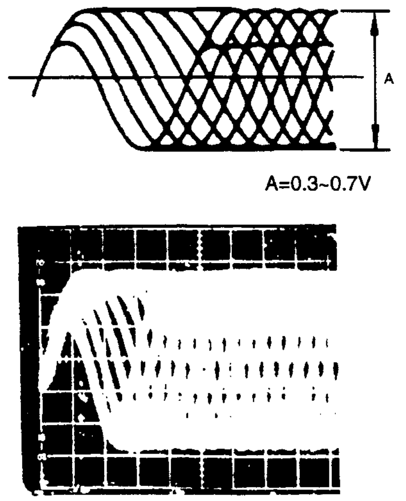

Main Cam
⑦
Switch Angle

CD WAVEFORM CONFIRMATION

1. HF level Confirming

Connection

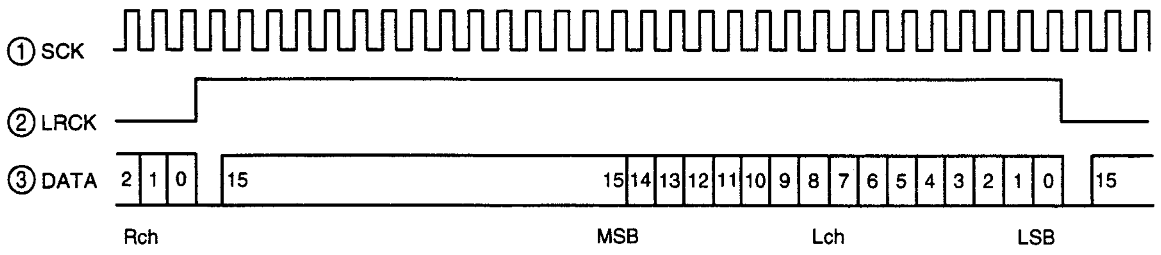

Oscilloscope
VCD P.C.Board
IC101: AN8808SB
Test Point
TP
HF (P2)
VREF (P1)
Probe
10:1
+
−
Test Disc: Tomita Yasuko (CA1094)
MO (TCD-784)

Oscilloscope		Check	Step
V	H	(Oscilloscope)	1. Push [▶] button. 2. Check HF level of oscilloscope. 3. Confirm that the waveform is in good shape. (◇eye pattern in center must be discriminated clearly.)
50mV/div or 20mV/div	0.2µs/div or 0.5µs/div	 A=0.3~0.7V	
• Set input mode to ALTERNATE or CHOPPER.			

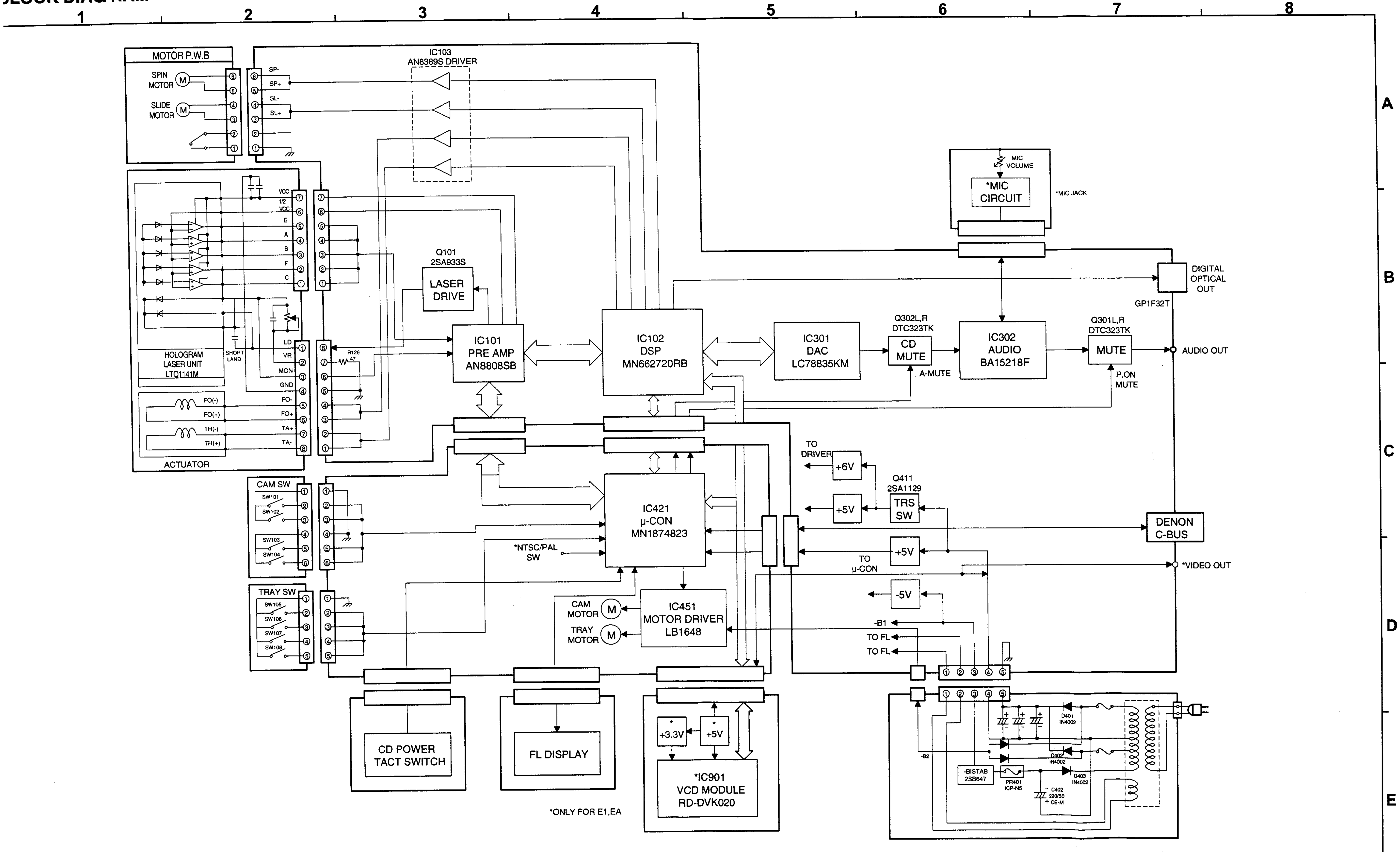
2. Servo IC Output Waveform

(IC102: MN662720RB Pin ① ~ ③)

Rch when LRCK = "L", Lch when LRCK = "H"



BLOCK DIAGRAM


1
2
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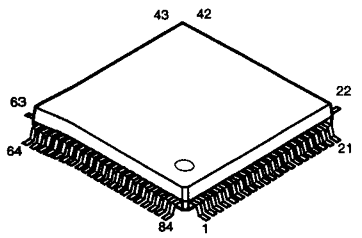
6
7
8
A
B
C
D
E
MOTOR P.W.B
SPIN MOTOR
SLIDE MOTOR
SP-
SP+
SL-
SL+
IC103
AN8389S DRIVER
VCC
1/2 VCC
E
A
B
F
C
LD
VR
MON
GND
FO-
FO+
TA+
TA-
FO(-)
FO(+)
TR(-)
TR(+)
HOLOGRAM LASER UNIT LTO1141M
SHORT LAND
ACTUATOR
R126 47
Q101 2SA933S
LASER DRIVE
IC101 PRE AMP AN8808SB
IC102 DSP MN662720RB
IC301 DAC LC78835KM
Q302L,R DTC323TK
CD MUTE
A-MUTE
IC302 AUDIO BA15218F
Q301L,R DTC323TK
MUTE
P.ON MUTE
AUDIO OUT
MIC VOLUME
*MIC CIRCUIT
*MIC JACK
DIGITAL OPTICAL OUT
GP1F32T
CAM SW
SW101
SW102
SW103
SW104
TRAY SW
SW105
SW106
SW107
SW108
*NTSC/PAL SW
IC421 μ-CON MN1874823
CAM MOTOR
TRAY MOTOR
IC451 MOTOR DRIVER LB1648
TO DRIVER
+6V
+5V
Q411 2SA1129
TRS SW
DENON C-BUS
+5V
TO μ-CON
*VIDEO OUT
-5V
-B1
TO FL
TO FL
-B2
-BISTAB 2SB647
PR401 ICP-N5
D401 IN4002
D402 IN4002
D403 IN4002
C402 220/50 CE-M
CD POWER TACT SWITCH
FL DISPLAY
*+3.3V
*+5V
*IC901 VCD MODULE RD-DVK020
*ONLY FOR E1,EA

CD AUTO CHANGER SECTION

SEMICONDUCTORS

● µCOM

MN1874823PD (IC421)


43
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22
64
21
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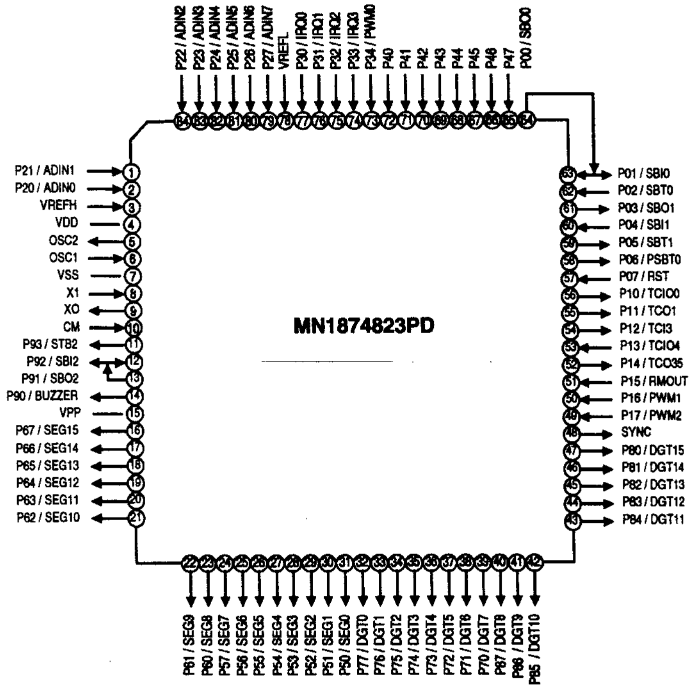
MN1874823PD
P22 / ADIN2
P23 / ADIN3
P24 / ADIN4
P25 / ADIN5
P26 / ADIN6
P27 / ADIN7
VREFL
P30 / IRQ0
P31 / IRQ1
P32 / IRQ2
P33 / IRQ3
P34 / PWM0
P40
P41
P42
P43
P44
P45
P46
P47
P00 / SBO0
P21 / ADIN1
P20 / ADIN0
VREFH
VDD
OSC2
OSC1
VSS
X1
XO
CM
P93 / STB2
P92 / SBI2
P91 / SBO2
P90 / BUZZER
VPP
P67 / SEG15
P66 / SEG14
P65 / SEG13
P64 / SEG12
P63 / SEG11
P62 / SEG10
P01 / SBI0
P02 / SBT0
P03 / SBO1
P04 / SBI1
P05 / SBT1
P06 / PSBT0
P07 / RST
P10 / TCIO0
P11 / TCO1
P12 / TCI3
P13 / TCIO4
P14 / TCO35
P15 / RMOUT
P16 / PWM1
P17 / PWM2
SYNC
P80 / DGT15
P81 / DGT14
P82 / DGT13
P83 / DGT12
P84 / DGT11
P61 / SEG9
P60 / SEG8
P57 / SEG7
P56 / SEG6
P55 / SEG5
P54 / SEG4
P53 / SEG3
P52 / SEG2
P51 / SEG1
P50 / SEG0
P77 / DGT0
P76 / DGT1
P75 / DGT2
P74 / DGT3
P73 / DGT4
P72 / DGT5
P71 / DGT6
P70 / DGT7
P87 / DGT8
P86 / DGT9
P85 / DGT10
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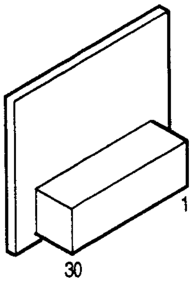
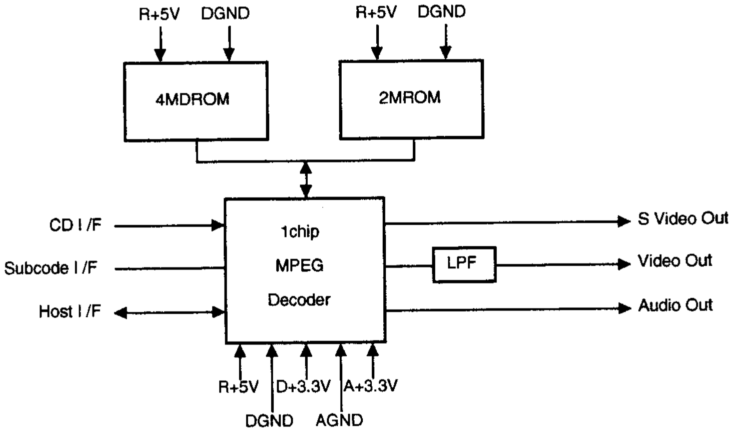
MN1874823PD Terminal Function

Pin No.	Symbol	Port Name	I/O	INI	ACT	Function
1	KEY1	P21/ADIN1	I	–	H	Key scan input 1
2	KEY2	P20/ADIN0	I	–	H	Key scan input 0
3	VREFH	VREFH	I	V_{DD}	V_{DD}	Ref.V for analog input (High)
4	+5V	V_{DD}	–	5V	5V	Power
5	4.32MHz	OSC2	O	–	–	µCOM system clock out
6	4.32MHz	OSC1	I	–	–	µCOM system clock in
7	GND	Vss	–	GND	GND	GND
8	X1	X1	I	–	–	µCOM system clock in
9	X0	X0	O	–	–	µCOM system clock out
10	CM	CM	I	GND	GND	Chip mode select input
11	—	P93/SBT2	O	H	L/H	Remote control signal in.
12	—	P92/SBI2	I	H	L	Pull up
13	—	P91/SBO2	O	H	L	NC
14	—	P90/BUZZE	O	H	L	NC
15	V_{PP}	V_{PP}	–	–	–	V_{PP}
16	Seg 15	P67/Seg15	O	L	H	FL segment out 15
17	Seg 14	P66/Seg14	O	L	H	FL segment out 14
18	Seg 13	P65/Seg13	O	L	H	FL segment out 13
19	Seg 12	P64/Seg12	O	L	H	FL segment out 12
20	Seg 11	P63/Seg11	O	L	H	FL segment out 11
21	Seg 10	P62/Seg10	O	L	H	FL segment out 10
22	Seg 9	P61/Seg9	O	L	H	FL segment out 9
23	Seg 8	P60/Seg8	O	L	H	FL segment out 8
24	Seg 7	P57/Seg7	O	L	H	FL segment out 7
25	Seg 6	P56/Seg6	O	L	H	FL segment out 6
26	Seg 5	P55/Seg5	O	L	H	FL segment out 5
27	Seg 4	P54/Seg4	O	L	H	FL segment out 4
28	Seg 3	P53/Seg3	O	L	H	FL segment out 3
29	Seg 2	P52/Seg2	O	L	H	FL segment out 2
30	Seg 1	P51/Seg1	O	L	H	FL segment out 1
31	Seg 0	P50/Seg 0	O	L	H	FL segment out 0
32	DGT 0 / KSCAN 7	P77/DGT 0	O	L	H	FL grid output 0, Key scan output 7
33	DGT 1 / KSCAN 6	P76/DGT 1	O	L	H	FL grid output 1, Key scan output 6
34	DGT 2 / KSCAN 5	P75/DGT 2	O	L	H	FL grid output 2, Key scan output 5
35	DGT 3 / KSCAN 4	P74/DGT 3	O	L	H	FL grid output 3, Key scan output 4
36	DGT 4 / KSCAN 3	P73/DGT 4	O	L	H	FL grid output 4, Key scan output 3
37	DGT 5 / KSCAN 2	P72/DGT 5	–	L	H	FL grid output 5, Key scan output 2
38	DGT 6 / KSCAN 1	P71/DGT 6	O	L	H	FL grid output 6, Key scan output 1
39	—	P70/DGT 7	O	L		NC
40	TRYM –	P87/DGT 8	O			CD changer mecha tray monitor output –
41	TRYM +	P86/DGT 9	O			CD changer mecha tray monitor output +
42	CAMM –	P85/DGT 10	O			CD changer mecha tray monitor output –
43	CAMM +	P84/DGT 11	O			CD changer mecha cam motor output +
44	CDPWR	P83/DGT 12	O		L	CD power control output
45	DRVMT	P82/DGT 13	O	H	L	Driver mute output
46	DMUTE	P81/DGT 14	O	L	H	CD DSP mute output
47	AMUTE	P80/DGT 15	O			Audio DSP mute output
48	SYNC	SYNC	O	–	–	NC
49	TLOCK	P17/PWM 2	O	L	L	CD DSP TLOCK signal input
50	FLOCK	P16/PWM 1	O	L	L	CD DSP FLOCK signal input
51	SENSE	P15/RMOUT	I	L	H	CD-DSP SENSE sianal input
52	MCLK	P14/TCO35	O	H	L/H	CD-DSP serial transmission clock output
53	STAT	P13/TCI04	O	–	H	CD-DSP serial transmission status input
54	MDATA	P12/TCI03	O	H	H	CD-DSP serial transmission data output
55	MLD	P11/TCO1	O	H	H	CD-DSP serial transmission load output
56	SRST	P10/TCIO0	O	L	H	Servo LSI reset output
57	RST	P07/RST	I	L	H	µCOM reset input
58	—	P06/PSBT0	O	L	H	Pull down
59	SQCK	P05/SBT1	O	H	L/H	Sub code (Q code) clock output
60	SUBQ	P04/SBI1	I	–	H	Sub code (Q code) data input
61	—	P03/SBO1	I	Hi-Z		NC
62	BUSCLK	P02/SBT0	I	–	L/H	DENON BUS transmission clock input
63	BUSIN	P01/SBI0	I	–		DENON BUS transmission data input
64	DATA	P00/SBO0	O			DENON BUS transmission data output
65	TRYSW4	P47	I	–		CD changer mecha tray SW input 4
66	TRYSW3	P46	I	–		CD changer mecha tray SW input 3
67	TRYSW2	P45	I	–		CD changer mecha tray SW input 2
68	TRYSW1	P44	I	–		CD changer mecha tray SW input 1
69	CAMSW4	P43	I	–		CD changer mecha cam SW input 4
70	CAMSW3	P42	I	–		CD changer mecha cam SW input 3
71	CAMSW2	P41	I	–		CD changer mecha cam SW input 2
72	CAMSW1	P40	I	–		CD changer mecha cam SW input 1
73	—	P34/PWM0	I	H	L	Pull up
74	PWRSW	P33/IRQ3	I			Power on input
75	—	P32/IRQ2	I	H	L	Pull up
76	—	P31/IRQ1	I	–	L/H	—
77	BUSINT	P30/IRQ0	I	–	L/H	DENON BUS communicate intervention input
78	VREFL	VREFL	I	GND	GND	Ref V for analog input (Low)
79	CD/VCD	P27/ADIN7	I	L	–	CD(L) and VCD switching input
80	LMTSW	P26/ADIN6	I	–	L	Pick-up inner circle position detect input
81	KEY5	P25/ADIN5	I	–	H	Key scan input 5
82	KEY4	P24/ADIN4	I	–	H	Key scan input 4
83	KEY3	P23/ADIN3	I	–	H	Key scan input 3
84	KEY2	P22/ADIN2	I	–	H	Key scan input 2

RD-DVK023-K (IC901)




R+5V
DGND
R+5V
DGND
4MDROM
2MROM
CD I /F
Subcode I /F
Host I /F
1chip
MPEG
Decoder
LPF
S Video Out
Video Out
Audio Out
R+5V
D+3.3V
A+3.3V
DGND
AGND

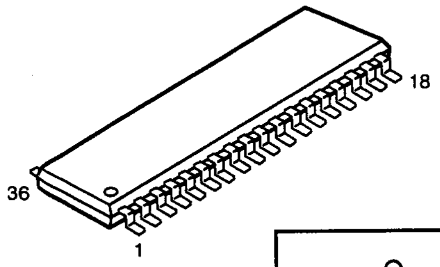
●RD-DVK023-K Terminal Function

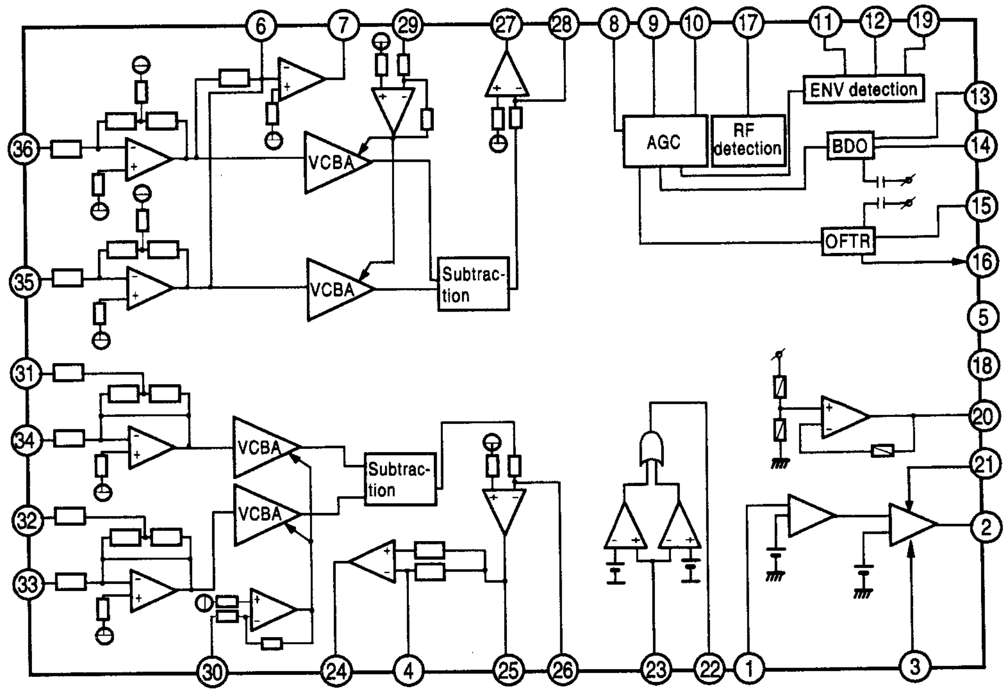
Pin No.	Terminal	I/O	Function
1	A+3.3V		+3.3V power supply for analog video
2	CVOUT	O	Composite video output
3	COUT	O	C video output (s)
4	YOUT	O	Y video output (s)
5	VGND		Analog video ground
6	VGND		Analog video ground
7	R+5V		Digital +5V power supply
8	D+3.3V		Digital +3.3V power supply
9	D+3.3V		Digital +3.3V power supply
10	DGND		Digital ground
11	DGND		Digital ground
12	XCK	I	Audio external frequency clock
13	EMPH	O	Audio emphasis output
14	DILRCK	O	Audio left right clock
15	HRDY	O	Host data ready
16	DISCK	O	Audio bit clock
17	DIDATA	O	Audio data serial bus
18	HINT	O	Host interrupt
19	SBCK	O	Subcode clock for CD-G
20	VRST	I	Hardware reset
21	HCK	I	Host clock
22	HDIO	I/O	Host serial data bus
23	CDSCK	I	CD bit clock
24	CDDATA	I	CD data
25	CDLRCK	I	CD left right clock
26	IPFLG	I	CD data error flag (C2P0)
27	HSEL	I	Host address/ data select
28	SUBC	I	Subcode data for CD-G
29	CLDCK	I	Subcode frame sync for CD-G
30	BLKCK	I	Subcode block for CD-G

CD AUTO CHANGER SECTION

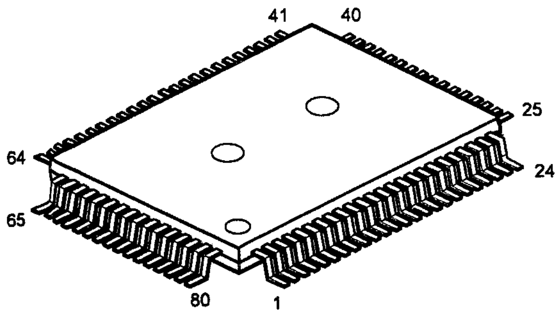
● IC's

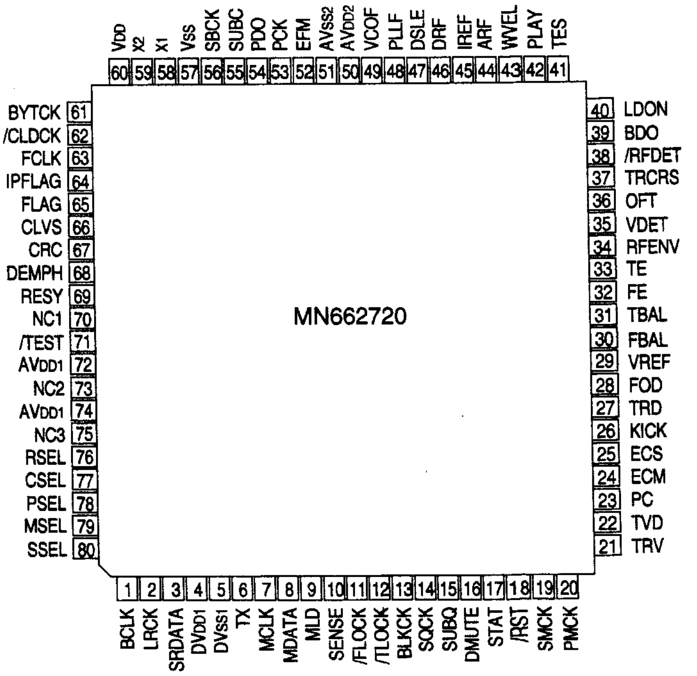
AN8808SB (IC101)



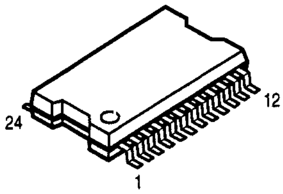

6
7
29
27
28
8
9
10
17
11
12
19
ENV detection
13
AGC
RF detection
BDO
14
15
OFTR
16
5
18
20
21
2
36
35
31
34
32
33
VCBA
VCBA
Subtraction
VCBA
VCBA
Subtraction
30
24
4
25
26
23
22
1
3

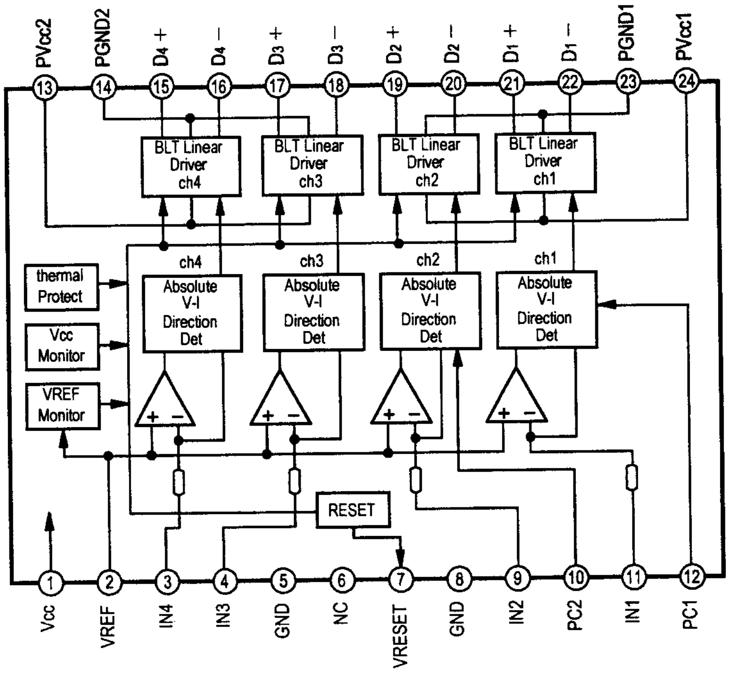
MN662720RB (IC102)


41
40
25
64
24
65
80
1

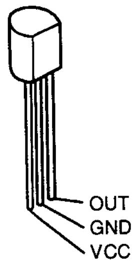

MN662720
60 VDD
59 X2
58 X1
57 VSS
56 SBCK
55 SUBC
54 PDO
53 PCK
52 EFM
51 AVSS2
50 AVDD2
49 VCOF
48 PLLF
47 DSLE
46 DRF
45 IREF
44 ARF
43 WVEL
42 PLAY
41 TES
61 BYTCK
62 /CLDCK
63 FCLK
64 IPFLAG
65 FLAG
66 CLVS
67 CRC
68 DEMPH
69 RESY
70 NC1
71 /TEST
72 AVDD1
73 NC2
74 AVDD1
75 NC3
76 RSEL
77 CSEL
78 PSEL
79 MSEL
80 SSEL
40 LDON
39 BDO
38 /RFDET
37 TRCRS
36 OFT
35 VDET
34 RFENV
33 TE
32 FE
31 TBAL
30 FBAL
29 VREF
28 FOD
27 TRD
26 KICK
25 ECS
24 ECM
23 PC
22 TVD
21 TRV
1 BCLK
2 LRCK
3 SRDATA
4 DVDD1
5 DVSS1
6 TX
7 MCLK
8 MDATA
9 MLD
10 SENSE
11 /FLOCK
12 /TLOCK
13 BLKCK
14 SQCK
15 SUBQ
16 DMUTE
17 STAT
18 /RST
19 SMCK
20 PMCK

AN8389S (IC103)

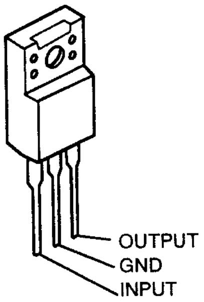



PVcc2
PGND2
D4 +
D4 −
D3 +
D3 −
D2 +
D2 −
D1 +
D1 −
PGND1
PVcc1
13
14
15
16
17
18
19
20
21
22
23
24
BLT Linear Driver ch4
BLT Linear Driver ch3
BLT Linear Driver ch2
BLT Linear Driver ch1
thermal Protect
Vcc Monitor
VREF Monitor
ch4
ch3
ch2
ch1
Absolute V-I Direction Det
Absolute V-I Direction Det
Absolute V-I Direction Det
Absolute V-I Direction Det
+ −
+ −
+ −
+ −
RESET
1
2
3
4
5
6
7
8
9
10
11
12
Vcc
VREF
IN4
IN3
GND
NC
VRESET
GND
IN2
PC2
IN1
PC1

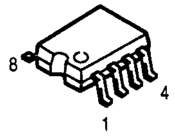
KIA7045P (IC422)

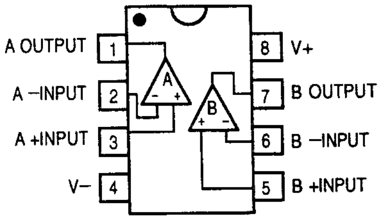


KIA7805PI (IC412, 413, 903)
KIA7806PI (IC414)

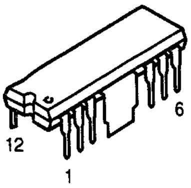

OUTPUT
GND
INPUT

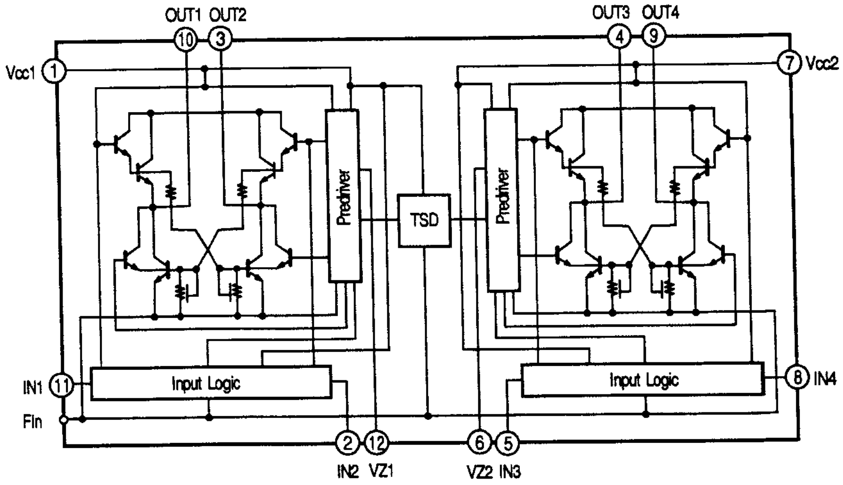
BA15218F (IC302, 902)




A OUTPUT
1
A −INPUT
2
A +INPUT
3
V−
4
8
V+
7
B OUTPUT
6
B −INPUT
5
B +INPUT
A
− +
B
+ −

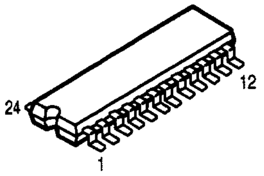
LB1648 (IC451)

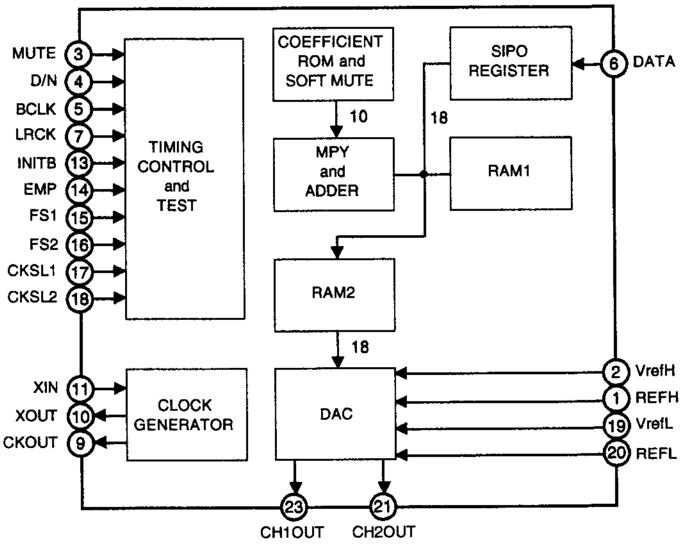


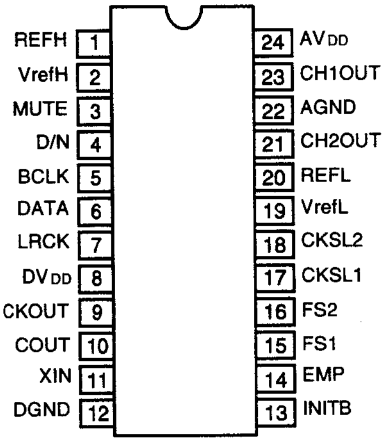

OUT1 OUT2
10
3
OUT3 OUT4
4
9
Vcc1
1
7
Vcc2
Predriver
TSD
Predriver
IN1
11
Input Logic
Input Logic
8
IN4
FIn
2
12
6
5
IN2 VZ1
VZ2 IN3

CD AUTO CHANGER SECTION

LC78835KM (IC301)

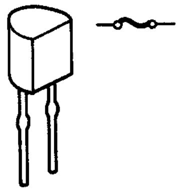



MUTE 3
D/N 4
BCLK 5
LRCK 7
INITB 13
EMP 14
FS1 15
FS2 16
CKSL1 17
CKSL2 18
TIMING CONTROL and TEST
COEFFICIENT ROM and SOFT MUTE
10
MPY and ADDER
SIPO REGISTER
18
RAM1
6 DATA
RAM2
18
XIN 11
XOUT 10
CKOUT 9
CLOCK GENERATOR
DAC
2 VrefH
1 REFH
19 VrefL
20 REFL
23 CH1OUT
21 CH2OUT


REFH 1
VrefH 2
MUTE 3
D/N 4
BCLK 5
DATA 6
LRCK 7
DVDD 8
CKOUT 9
COUT 10
XIN 11
DGND 12
24 AVDD
23 CH1OUT
22 AGND
21 CH2OUT
20 REFL
19 VrefL
18 CKSL2
17 CKSL1
16 FS2
15 FS1
14 EMP
13 INITB

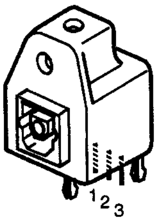
● IC PROTECTOR

ICP-N5 (PR401)

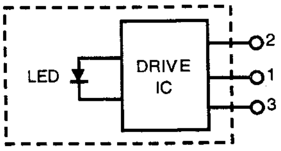


● OPT. DIGITAL OUTPUT

GP1F32T (IC201)



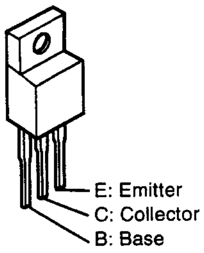
1. Vin
2. Vcc
3. GND


LED
DRIVE IC
2
1
3

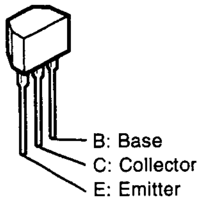
LED: Ga Al As
DRIVE IC: Silicon

● TRANSISTORS

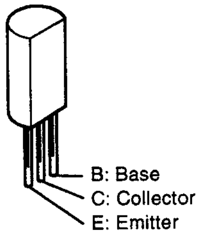
2SA1129


E: Emitter
C: Collector
B: Base

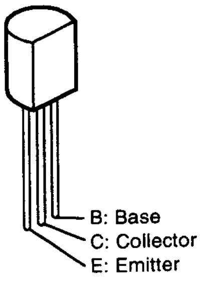
2SA933S


B: Base
C: Collector
E: Emitter

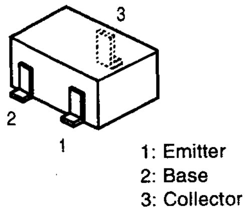
2SB647


B: Base
C: Collector
E: Emitter

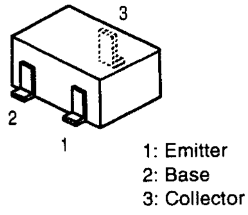
2SA844

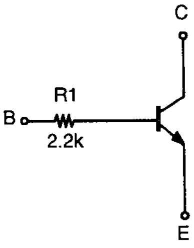

B: Base
C: Collector
E: Emitter

2SA1037AK
2SC2412K

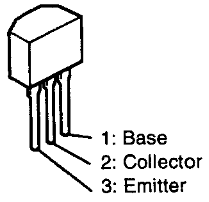

3
2
1
1: Emitter
2: Base
3: Collector

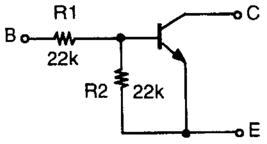
DTC323TK


3
2
1
1: Emitter
2: Base
3: Collector



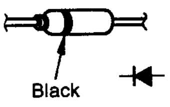
DTC124ES


1: Base
2: Collector
3: Emitter

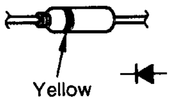

R1
B
22k
R2
22k
C
E

● DIODES

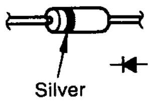
1N4531



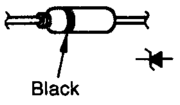
1SS133



1N4002



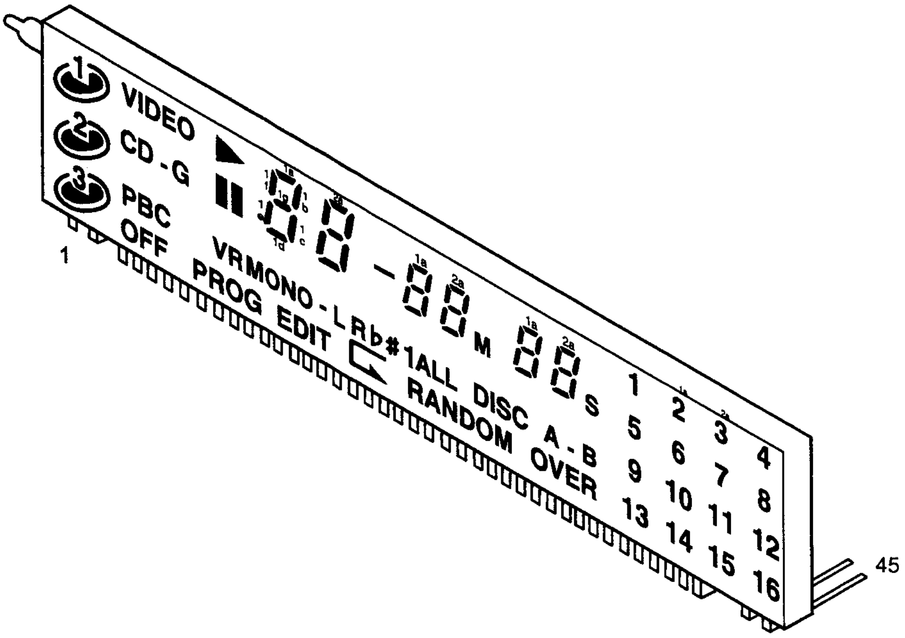
MTZJ3.9B MTZJ5.6A
MTZJ5.1B MTZJ6.2A
MTZJ5.1C MTZJ6.8A
MTZJ27A



CD AUTO CHANGER SECTION

● FL DISPLAY 6-ST-59GK (FL801)

(Part No. : 9LDD00071)


1
45
VIDEO
CD-G
PBC
OFF
VR
MONO-L
R
PROG
EDIT
1ALL
DISC
RANDOM
A-B
OVER
M
S
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16

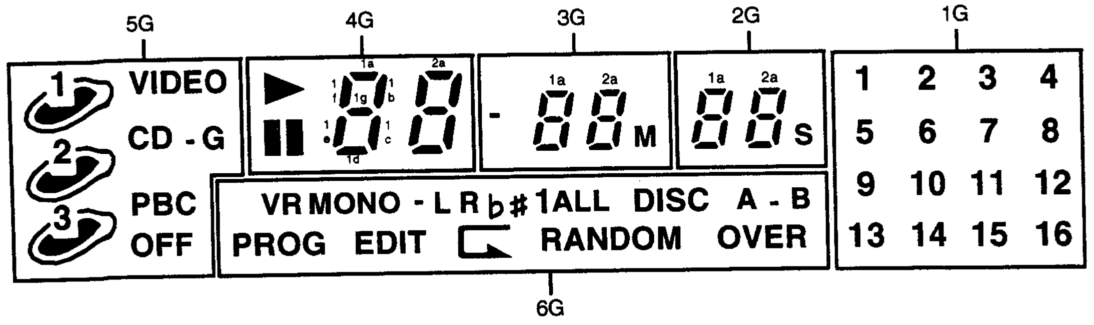
Pin Connection

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Connection	F1	F1	NP	NP	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16	NX	NX	NX

Pin No.	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Connection	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX	6G	5G	4G	3G	2G	1G	NP	NP	F2	F2

NOTE 1) F1,F2 ---------------- Filament
2) NP ---------------- No Pin
3) NX ---------------- No Extension Pin
4) DL ---------------- Datum Line
5) 1G~6G ---------- Grid
6) Visible Angle (MIN) : 33° (Upper), 25° (Lower)

Grid Partition


5G
4G
3G
2G
1G
6G
1
2
3
VIDEO
CD - G
PBC
OFF
1a
1g
1d
2a
1a
2a
- 88 M
1a
2a
88 S
VR MONO - L R b # 1ALL DISC A - B
PROG EDIT RANDOM OVER
1 2 3 4
5 6 7 8
9 10 11 12
13 14 15 16

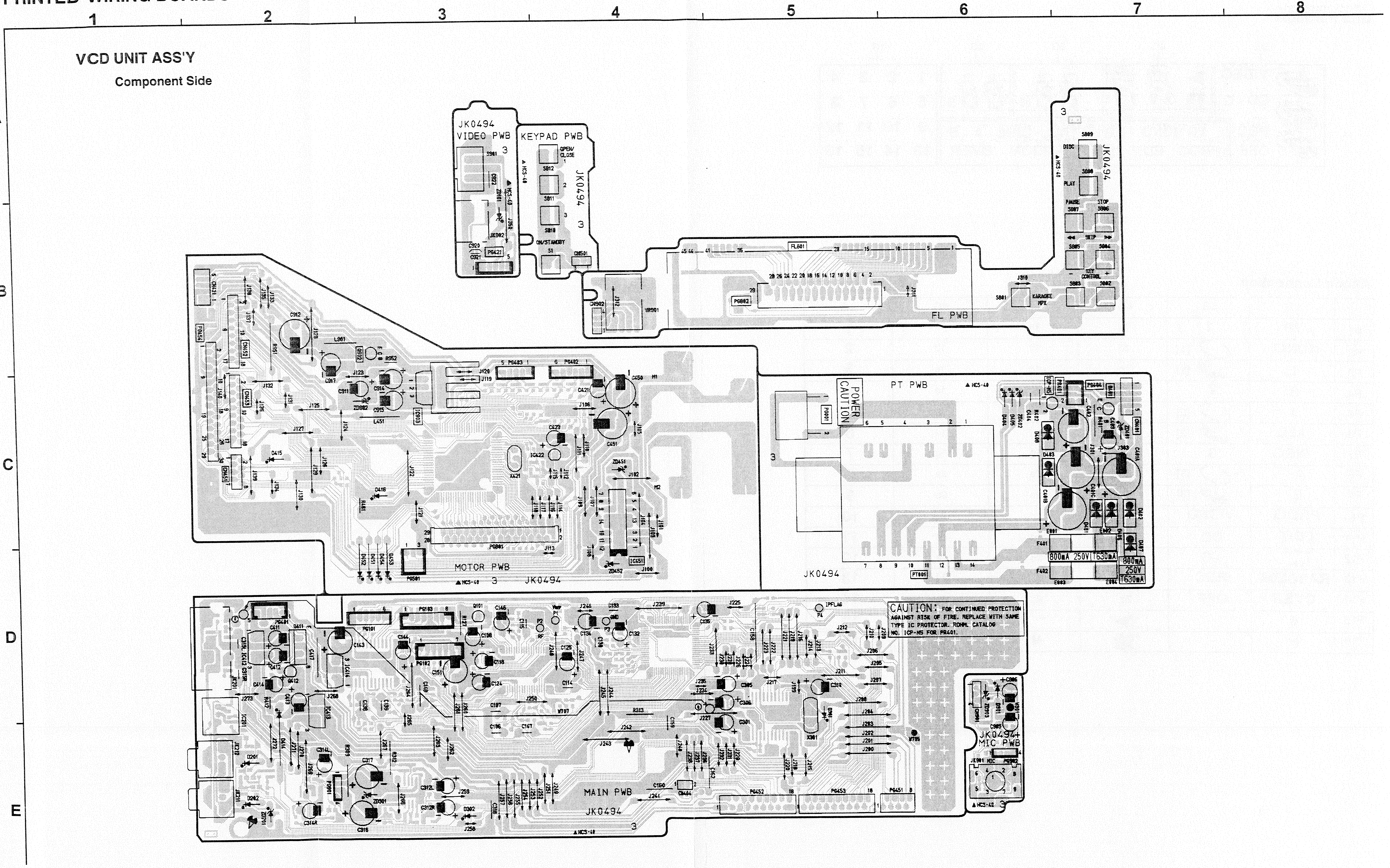
Anode Connection

	6G	5G	4G	3G	2G	1G
P1	**VR**	**1**	1a	1a	1a	**1**
P2	**MONO -**	○ [1]	1b	1b	1b	**2**
P3	**L**	● [1]	1c	1c	1c	**3**
P4	**R**	**2**	1d	1d	1d	**4**
P5	**1**	○ [2]	1e	1e	1e	**5**
P6	**ALL**	● [2]	1 f	1 f	1 f	**6**
P7	**DISC**	**3**	1g	1g	1g	**7**
P8	**A -**	○ [3]	2a	2a	2a	**8**
P9	**B**	● [3]	2b	2b	2b	**9**
P10	**PROG**	**VIDEO**	2c	2c	2c	**10**
P11	**EDIT**	**CD**	2d	2d	2d	**11**
P12	↳	**-G**	2e	2e	2e	**12**
P13	**RANDOM**	**PBC**	2 f	2 f	2 f	**13**
P14	**OVER**	**OFF**	2g	2g	2g	**14**
P15	**#**	–	▶	-	–	**15**
P16	**b**	–	⏸	**M**	**S**	**16**

PRINTED WIRING BOARDS

VCD UNIT ASS'Y

Component Side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8
A
B
C
D
E
JK0494
VIDEO PWB
KEYPAD PWB
OPEN/CLOSE
ON/STANDBY
DISC
PLAY
PAUSE
STOP
SKIP
KEY CONTROL
KARAOKE MPX
FL PWB
MOTOR PWB
PT PWB
POWER CAUTION
800mA 250V T630mA
800mA 250V T630mA
MAIN PWB
MIC PWB
CAUTION: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE WITH SAME TYPE IC PROTECTOR. ROHM. CATALOG NO. ICP-N5 FOR PR401.
JK0494
JK0494
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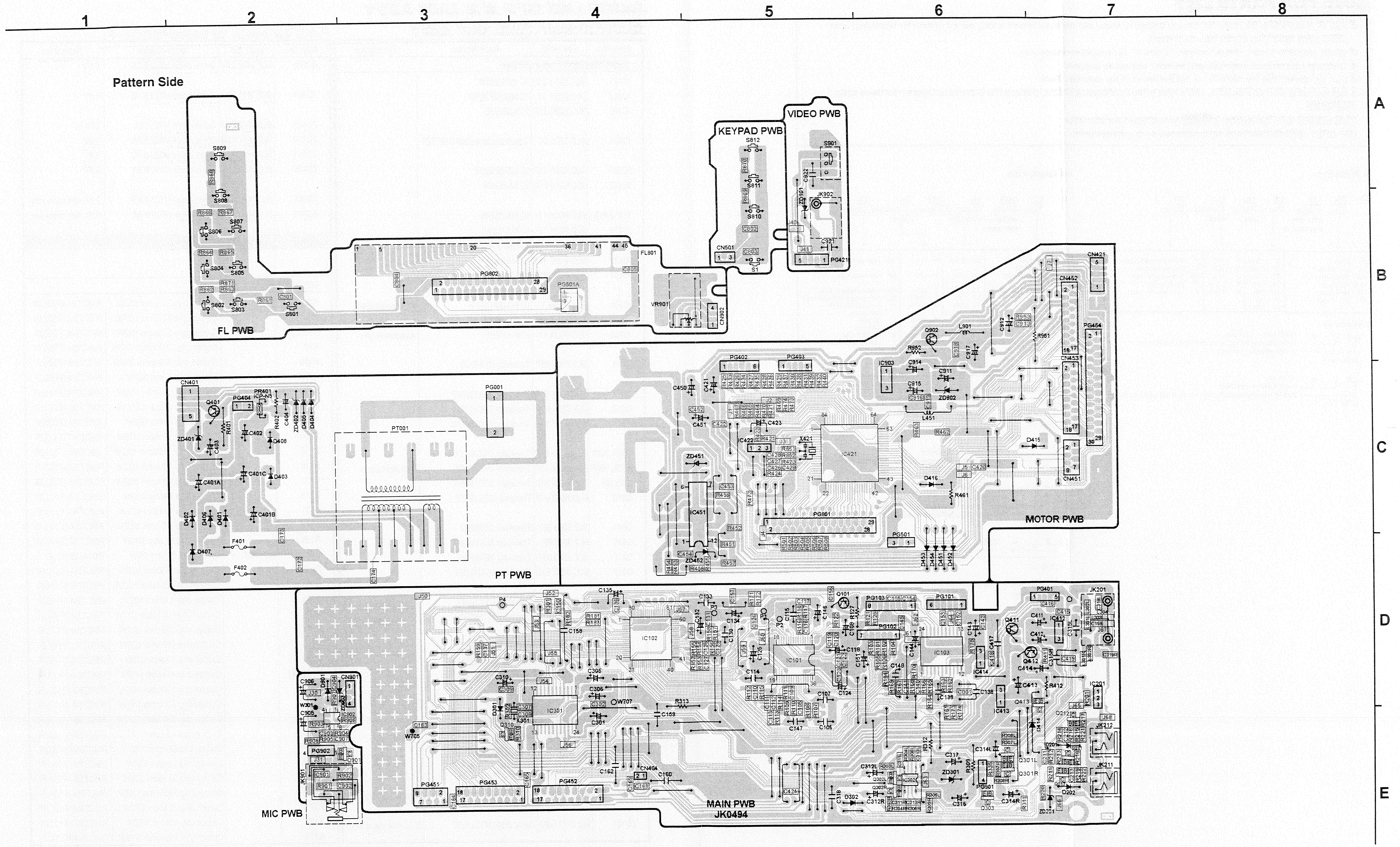
JK0494

Pattern Side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A
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C
D
E
VIDEO PWB
KEYPAD PWB
FL PWB
FL801
PG802
VR901
CN501
CN902
PG421
JK902
S901
CN421
CN452
PG454
CN453
CN451
PG402
PG403
IC421
IC451
PG801
PG501
MOTOR PWB
CN401
PG404
PT001
PG001
PT PWB
F401
F402
PG401
JK201
IC102
IC101
IC103
IC301
PG103
PG101
PG102
IC201
JK212
JK211
PG451
PG453
PG452
PG901
CN901
PG902
JK901
MIC PWB
MAIN PWB
JK0494

CD AUTO CHANGER SECTION

NOTE FOR PARTS LIST

- Part indicated with the mark "⊙" are not always in stock and possibly to take a long period of time for supplying, or in some case supplying of part may be refused.
- When ordering of part, clearly indicate "1" and "I" (i) to avoid mis-supplying.
- Ordering part without stating its part number can not be supplied.
- Part indicated with the mark "★" is not illustrated in the exploded view.
- Not including Carbon Film ±5%, 1/4W Type in the P.W.Board parts list. (Refer to the Schematic Diagram for those parts.)

WARNING:
Parts marked with this symbol ⚠▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

● Resistors

Ex.:	RN	14K	2E	182	G	FR
	Type	Shape and performance	Power	Resistance	Allowable error	Others

RD : Carbon RC : Composition RS : Metal oxide film RW : Winding RN : Metal film RK : Metal mixture	2B : 1/8W 2E : 1/4W 2H : 1/2W 3A : 1W 3D : 2W 3F : 3W 3H : 5W	F : ±1% G : ±2% J : ±5% K : ±10% M : ±20%	P : Pulse-resistant type NL : Low noise type NB : Non-burning type FR : Fuse-resistor F : Lead wire forming

✱ Resistance

1 8 2 ⇒ 1800 ohm = 1.8 kohm
2 — Indicates number of zeros after effective number.
1 8 — 2-digit effective number.

- Units: ohm

1 R 2 ⇒ 1.2 ohm
2 — 1-digit effective number.
1 R — 2-digit effective number, decimal point indicated by R.

- Units: ohm

● Capacitors

Ex.:	CE	04W	1H	2R2	M	BP
	Type	Shape and performance	Dielectric strength	Capacity	Allowable error	Others

CE : Aluminum foil electrolytic CA : Aluminum solid electrolytic CS : Tantalum electrolytic CQ : Film CK : Ceramic CC : Ceramic CP : Oil CM : Mica CF : Metallized CH : Metallized	0J : 6.3V 1A : 10V 1C : 16V 1E : 25V 1V : 35V 1H : 50V 2A : 100V 2B : 125V 2C : 160V 2D : 200V 2E : 250V 2H : 500V 2J : 630V	F : ±1% G : ±2% J : ±5% K : ±10% M : ±20% Z : +80% −20% P : +100% −0% C : ±0.25pF D : ±0.5pF = : Others	HS : High stability type BP : Non-polar type HR : Ripple-resistant type DL : For change and discharge HF : For assuring high frequency U : UL part C : CSA part W : UL-CSA type F : Lead wire forming

✱ Capacity (electrolyte only)

2 2 2 ⇒ 2200μF
2 — Indicates number of zeros after effective number.
2 2 — 2-digit effective number.

- Units: μF.

2 R 2 ⇒ 2.2μF
2 — 1-digit effective number.
2 R — 2-digit effective number, decimal point indicated by R.

- Units: μF.

✱ Capacity (except electrolyte)

2 2 2 ⇒ 2200pF=0.0022μF
2 — (More than 2) — Indicates number of zeros after effective number.
2 2 — 2-digit effective number.

- Units: μF.

2 2 1 ⇒ 220pF
1 — (0 or 1) — Indicates number of zeros after effective number.
2 2 — 2-digit effective number.

- Units: pF.

- When the dielectric strength is indicated in AC, "AC" is included after the dieelectric strength value.

PARTS LIST OF P.W.B. UNIT ASS'Y

CDC/VCD MAIN P.W.B. UNIT ASS'Y

※ As for "Note" in Part No., refer to ADDENDUM PARTS LIST.

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC101	9LC K077 21R	IC AN8808SB	
IC102	9LC K077 31	IC MN662720RB	
IC103	9LC K080 31R	IC AN8389S	
IC201	9LD T001 31	Optical digital output GP1F32T	
IC301	9LC K098 71R	IC LC78835KM	
IC302	9LC K014 51R	IC BA15218F	
IC412,413	9LC P024 11	IC KIA7805PI	
IC414	9LC P024 12	IC KIA7806PI	
IC421	9LC K077 46	IC MN1874823PD	
IC422	9LC P007 12R	IC KIA7045P	
IC451	9LC P025 41	IC LB1468	
IC901	9LC W002 11	IC RD-DVK023-K	Asia model only
IC902	9LC K014 51R	IC BA15218F	Asia model only
IC903	9LC P024 11	IC KIA7805PI	Asia model only
Q101	9L2 3182 93T	Transistor 2SA933S	
Q211	9LC A006 91R	Transistor 2SA1037AK	
Q212	9L2 3256 91R	Transistor 2SC2412K	
Q213	9LC A006 91R	Transistor 2SA1037AK	
Q301L,301R	9LC A005 81R	Transistor DTC323TK	
Q302L,302R	9LC A005 81R	Transistor DTC323TK	Asia model only
Q303,304	9LC A007 91R	Transistor DTC124ES	
Q310	9LC A007 91R	Transistor DTC124ES	
Q401	9L2 3286 25T	Transistor 2SB647C	
Q411	9L2 3243 62	Transistor 2SA1129K	
Q412	9L2 3280 83T	Transistor 2SA844(E)	
Q413	9LC A007 91R	Transistor DTC124ES	
Q901	9LC A005 81R	Transistor DTC323TK	Asia model only
Q902	9L2 3190 62	Transistor HIT5609C	Asia model only
D201,202	9L2 3989 21T	Diode 1N4531/1SS133	
D203	9L2 3989 21T	Diode 1N4531/1SS133	
D301,302	9L2 3989 21T	Diode 1N4531/1SS133	
D401~403	9L2 3980 66	Diode 1N4002	
D404,405	9L2 3989 21T	Diode 1N4531/1SS133	
D406~408	9L2 3980 66	Diode 1N4002	
D414~416	9L2 3989 21T	Diode 1N4531/1SS133	
D451~454	9L2 3989 21T	Diode 1N4531/1SS133	
D901	9L2 3989 21T	Diode 1N4531/1SS133	Asia model only
ZD101	9L2 3481 03M	Zener diode MTZJ 5.1C	5.1V, Asia model only
ZD201	9L2 3481 21M	Zener diode MTZJ 6.2A	6.2V
ZD301	9L2 3481 02M	Zener diode MTZJ 5.1B	5.1V
ZD401	9L2 3482 71M	Zener diode MTZJ 27A	27V
ZD402	9L2 3481 11M	Zener diode MTZJ 5.6A	5.6V
ZD451	9L2 3481 03M	Zener diode MTZJ 5.1C	5.1V
ZD452	9L2 3481 31M	Zener diode MTZJ 6.8A	6.8V
ZD902	9L2 3480 72M	Zener diode MTZJ 3.9B	3.9V, Asia model only
ZD903	9L2 3481 31M	Zener diode MTZJ 6.8A	6.8V, Asia model only
⚠PR401	9L2 7262 21R	IC protector ICP-N5	
RESISTORS GROUP			
R101,102		Carbon chip 22 kohm 1/32W	RMC73M-1F223JR
R103,104		Carbon chip 68 kohm 1/32W	RMC73M-1F683JR
R105,106		Carbon chip 22 kohm 1/32W	RMC73M-1F223JR
R107		Carbon chip 390 kohm 1/32W	RMC73M-1F394JR
R108		Carbon chip 330 kohm 1/32W	RMC73M-1F334JR
R109		Carbon chip 0 ohm 1/32W	RMC73M-1F000JR
R110		Carbon chip 18 kohm 1/32W	RMC73M-1F183JR
R111		Carbon chip 22 kohm 1/32W	RMC73M-1F223JR
R112		Carbon chip 0 ohm 1/32W	RMC73M-1F000JR
R114		Carbon chip 39 kohm 1/32W	RMC73M-1F393JR
R115		Carbon chip 220 kohm 1/32W	RMC73M-1F224JR
R116		Carbon chip 1.8 kohm 1/32W	RMC73M-1F182JR
R117		Carbon chip 1.5 kohm 1/32W	RMC73M-1F152JR
R118		Carbon chip 1 kohm 1/32W	RMC73M-1F102JR
R121		Carbon chip 10 kohm 1/32W	RMC73M-1F103JR
R122		Carbon chip 100 ohm 1/32W	RMC73M-1F101JR
R126		Carbon chip 47 ohm 1/32W	RMC73M-1F470JR
R127	9LH 1295 37	Carbon film 18 ohm 1/4W	RD14S2E180JR
R152		Carbon chip 47 kohm 1/32W	RMC73M-1F473JR
R153		Carbon chip 120 kohm 1/32W	RMC73M-1F124JR
R154		Carbon chip 1 Mohm 1/32W	RMC73M-1F105JR
R155		Carbon chip 100 kohm 1/32W	RMC73M-1F104JR
R157		Carbon chip 150 ohm 1/32W	RMC73M-1F151JR
R158		Carbon chip 680 ohm 1/32W	RMC73M-1F681JR
R159		Carbon chip 1 kohm 1/32W	RMC73M-1F102JR
R161,162		Carbon chip 47 kohm 1/32W	RMC73M-1F473JR
R163		Carbon chip 1.8 kohm 1/32W	RMC73M-1F182JR
R164		Carbon chip 2.7 kohm 1/32W	RMC73M-1F272JR
R165		Carbon chip 220 kohm 1/32W	RMC73M-1F224JR
R166		Carbon chip 1.8 kohm 1/32W	RMC73M-1F182JR
R167		Carbon chip 68 kohm 1/32W	RMC73M-1F683JR
R168		Carbon chip 1 kohm 1/32W	RMC73M-1F102JR
R169		Carbon chip 33 kohm 1/32W	RMC73M-1F333JR
R170		Carbon chip 330 kohm 1/32W	RMC73M-1F334JR
R171		Carbon chip 22 kohm 1/32W	RMC73M-1F223JR
R172		Carbon chip 1 kohm 1/32W	RMC73M-1F102JR
R173		Carbon chip 150 kohm 1/32W	RMC73M-1F154JR

Ref. No.	Part No.	Part Name	Remarks
R174		Carbon chip 12 kohm 1/32W	RMC73M-1F123JR
R175		Carbon chip 100 ohm 1/32W	RMC73M-1F101JR
R181		**NOTE**	**NOTE**
R182		**NOTE**	**NOTE**
R183		**NOTE**	**NOTE**
R201		Carbon chip 470 ohm 1/32W	RMC73M-1F471JR
R211		Carbon chip 10 kohm 1/32W	RMC73M-1F103JR
R212,213		Carbon chip 22 kohm 1/32W	RMC73M-1F223JR
R214		Carbon chip 10 kohm 1/32W	RMC73M-1F103JR
R215		Carbon chip 47 kohm 1/32W	RMC73M-1F473JR
R216		Carbon chip 10 kohm 1/32W	RMC73M-1F103JR
R217~219		Carbon chip 22 kohm 1/32W	RMC73M-1F223JR
R220		Carbon chip 10 kohm 1/32W	RMC73M-1F103JR
R221		Carbon chip 220 ohm 1/32W	RMC73M-1F221JR
R222		Carbon chip 100 ohm 1/32W	RMC73M-1F101JR
R301		Carbon chip 560 ohm 1/32W	RMC73M-1F561JR
R302		Carbon chip 1 Mohm 1/32W	RMC73M-1F105JR
R303L,303R		Carbon chip 680 ohm 1/32W	RMC73M-1F681JR
R304L,304R		Carbon chip 9.1 kohm 1/32W	RMC73M-1F912JR
R305L,305R		Carbon chip 2.2 kohm 1/32W	RMC73M-1F222JR, Asia model only
R306L,306R		Carbon chip 12 kohm 1/32W	RMC73M-1F123JR
R307L,307R		Carbon chip 68 kohm 1/32W	RMC73M-1F683JR
R308L,308R		Carbon chip 680 ohm 1/32W	RMC73M-1F681JR
R309	9LH 1132 21	Carbon film 22 ohm 1/2W	RD14S2H220JB
R311		**NOTE**	**NOTE**
R312	9LH 1133 62	Carbon film 2.2 kohm 1/2W	RD14S2H222JB
R313	9LH 1132 21	Carbon film 22 ohm 1/2W	RD14S2H220JB
R314		Carbon chip 1 kohm 1/32W	RMC73M-1F102JR
R315		Carbon chip 10 kohm 1/32W	RMC73M-1F103JR
R335		Carbon chip 4.7 kohm 1/32W	RMC73M-1F472JR
R401	9LH 1133 71	Carbon film 3.3 kohm 1/20W	RD14S1H332JB
R402	9L0 7000 54M	Carbon film 10 kohm 1/16W	RD14S1J103JB
R411		Carbon chip 22 kohm 1/32W	RMC73M-1F223JR
R412	9L0 7000 45M	Carbon film 2.2 kohm 1/16W	RD14S1J222JB
R421		Carbon chip 47 kohm 1/32W	RMC73M-1F473JR
R422		Carbon chip 1 kohm 1/32W	RMC73M-1F102JR
R423		Carbon chip 10 kohm 1/32W	RMC73M-1F103JR
R424~432		Carbon chip 1 kohm 1/32W	RMC73M-1F102JR
R433~440		Carbon chip 22 kohm 1/32W	RMC73M-1F223JR
R450	9L0 7000 44M	Carbon film 1.8 kohm 1/16W	RD14S1J182JB
R451~458		Carbon chip 10 kohm 1/32W	RMC73M-1F103JR
R461	9L0 7000 54M	Carbon film 10 kohm 1/16W	RD14S1J103JB
R462~467		Carbon chip 10 kohm 1/32W	RMC73M-1F103JR
R469		Carbon chip 10 kohm 1/32W	RMC73M-1F103JR
R470		Carbon chip 10 kohm 1/32W	RMC73M-1F103JR, Asia model only
R471~474		Carbon chip 10 kohm 1/32W	RMC73M-1F103JR
R851,852		Carbon chip 15 kohm 1/32W	RMC73M-1F153JR

Ref. No.	Part No.	Part Name	Remarks
R861		Carbon chip 1.5 kohm 1/32W	RMC73M-1F152JR
R862		Carbon chip 2.2 kohm 1/32W	RMC73M-1F222JR
R863		Carbon chip 2.7 kohm 1/32W	RMC73M-1F272JR
R864		Carbon chip 5.6 kohm 1/32W	RMC73M-1F562JR
R865		Carbon chip 8.2 kohm 1/32W	RMC73M-1F822JR
R866		Carbon chip 15 kohm 1/32W	RMC73M-1F153JR
R867		Carbon chip 33 kohm 1/32W	RMC73M-1F333JR
R868		Carbon chip 82 kohm 1/32W	RMC73M-1F823JR
R869		Carbon chip 1.5 kohm 1/32W	RMC73M-1F152JR
R870		Carbon chip 2.2 kohm 1/32W	RMC73M-1F222JR
R871		Carbon chip 3.9 kohm 1/32W	RMC73M-1F392JR
R901		Carbon chip 4.7 kohm 1/32W	RMC73M-1F472JR, Asia model only
R902		Carbon chip 100 kohm 1/32W	RMC73M-1F104JR, Asia model only
R903		Carbon chip 1 kohm 1/32W	RMC73M-1F102JR, Asia model only
R904		Carbon chip 47 kohm 1/32W	RMC73M-1F473JR, Asia model only
R905		Carbon chip 680 ohm 1/32W	RMC73M-1F681JR, Asia model only
R906		Carbon chip 4.7 kohm 1/32W	RMC73M-1F472JR, Asia model only
R907		Carbon chip 10 kohm 1/32W	RMC73M-1F103JR, Asia model only
R908		Carbon chip 100 kohm 1/32W	RMC73M-1F104JR, Asia model only
R951	9L0 7000 54M	Carbon film 10 kohm 1/16W	RD14S1J103JB, Asia model only
R952	9L0 7000 32M	Carbon film 220 ohm 1/16W	RD14S1J221JB, Asia model only
R953		Carbon chip 10 kohm 1/32W	RMC73M-1F103JR, Asia model only
VR901	9L0 1581 09	Variable resistor 10 kohm	RVR-12H103(3B), Asia model only
CAPACITORS GROUP			
C105		Ceramic chip 470 pF/50V	CK73MSL1H471JR
C106,107	9L0 8800 16R	Mylar film 0.1μF/50V	CQ92HIH104KEBK
C108	9L0 8000 12Y	Electrolytic 4.7μF/50V	CE04W1H4R7MB (SSL)
C109		Ceramic chip 1200 pF/50V	CK73MB1H122KR
C111		Ceramic chip 0.033μF/50V	CK73MB1H333KR
C112		Ceramic chip 4700 pF/50V	CK73MB1H472KR
C114	9L0 8800 16R	Mylar film 0.1μF/50V	CQ92HIH104KEBK
C115	9L0 8800 14R	Mylar film 0.047μF/50V	CQ92MIH473KEBK
C116		Ceramic chip 10 pF/50V	CK73MSL1H100JR
C117		Ceramic chip 120 pF/50V	CK73MSL1H121JR
C118	9L0 8000 03Y	Electrolytic 1μF/50V	CE04W1H010MB (SSL)
C119		Ceramic chip 100 pF/50V	CK73MSL1H101JR
C120		Ceramic chip 0.027μF/16V	CK73MB1C273KR
C121,122		Ceramic chip 1000 pF/50V	CK73MB1H102KR

CD AUTO CHANGER SECTION

Ref. No.	Part No.	Part Name	Remarks
C123		Ceramic chip 0.1µF/16V	CK73MB1C104KR
C124	9L0 8000 57R	Electrolytic 220µF/10V	CE04W1A221MB (SME)
C125	9L0 8000 03Y	Electrolytic 1µF/50V	CE04W1H010MB (SSL)
C126		Ceramic chip 390 pF/50V	CK73MSL1H391JR
C127,128		Ceramic chip 0.022µF/16V	CK73MB1C223KR
C130	9L0 8800 16R	Mylar film 0.1µF/50V	CQ92M1H104KB
C132	9L0 8001 05R	Electrolytic 0.33µF/50V	CE04W1HR33MB (SRA)
C133	9L0 8800 16R	Mylar film 0.1µF/50V	CQ92HIH104KEBK
C134,135	9L0 8000 48R	Electrolytic 100µF/10V	CE04W1A101MB (SME)
C136		Ceramic chip 0.1µF/16V	CK73MB1C104JR
C137		Ceramic chip 100 pF/50V	CK73MSL1H101JR
C138	9L0 8800 13R	Mylar film 0.033µF/50V	CQ92MIH333KEBK
C139	9L0 8800 18R	Mylar film 0.22µF/50V	CQ92HIH224KEBK
C140		Ceramic chip 2200 pF/50V	CK73B1H222JR
C141		Ceramic chip 1000 pF/50V	CK73MSL1H102JR
C142		Ceramic chip 0.01µF/50V	CK73MB1H103JR
C143	9L0 8000 73R	Electrolytic 470µF/10V	CE04W1A471MB
C144	9L0 8000 48R	Electrolytic 100µF/10V	CE04W1A101MB (SME)
C145		Ceramic chip 0.01µF/50V	CK73MB1H103JR
C146	9L0 8000 05Y	Electrolytic 2.2µF/50V	CE04W1H2R2MB (SSL)
C150		Ceramic chip 1000 pF/50V	CK73MSL1H102JR
C151	9L0 8000 65R	Electrolytic 330µF/10V	CE04W1A331MB
C152~155		Ceramic chip 0.1µF/16V	CK73MB1C104KR
C156		Ceramic chip 0.01µF/50V	CK73MB1H103KR
C158~160	9LH 2400 67	Ceramic 0.047µF/50V	CK14F1H473ZB050
C161		Ceramic chip 0.047µF/50V	CK73MB1H473KR
C162	9LH 2400 67	Ceramic 0.047µF/50V	CK14F1H473ZB050
C163~166		Ceramic chip 0.047µF/50V	CK73MB1H473KR
C211~213		Ceramic chip 1000 pF/50V	CK73MSL1H102JR
C214		Ceramic chip 0.047µF/50V	CK73MB1H473KR
C301	9L0 8000 57R	Electrolytic 220µF/6.3V	CE04W0J221MB (SME)
C302		Ceramic chip 0.022µF/16V	CK73MB1C223KR
C305,306	9L0 8000 15Y	Electrolytic 10µF/16V	CE04WIC100MB (SSL)
C307,308		Ceramic chip 22 pF/50V	CK73MCH1H220JR
C309		Ceramic chip 0.022µF/16V	CK73MB1C223KR
C310	9L0 8000 15Y	Electrolytic 10µF/16V	CE04WIC100MB (SSL)
C311L,311R		Mylar film 4700 pF/50V	CQ92M1H472KB
C312L,312R	9L0 8000 15Y	Electrolytic 10µF/16V	CE04WIC100MB (SSL)
C314L,314R	9L0 8000 26Y	Electrolytic 22µF/50V	CE04W1H220MB (SSL)
C315L,315R	9L0 8800 03R	Mylar film 1000 pF/50V	CQ92M1H102KB
C316,317	9L0 8000 59Y	Electrolytic 220µF/25V	CE04W1E221MB (SSL)
C318	9L0 8900 43M	Ceramic 0.01µF/16V	CG14X1C103MB
C401A,401B	9L0 8003 67F	Electrolytic 2200µF/16V	CE04W1C222F
C401C	**NOTE**	**NOTE**	**NOTE**
C402	9L0 8000 62N	Electrolytic 220µF/50V	CE04W1H221MB (SME)
C403	9L0 8000 44Y	Electrolytic 47µF/50V	CE04WIH470MB (SSL)
C404	9LH 2441 71	Ceramic 0.01µF/50V	CK45B1H103KB
C411~414	9L0 8000 18Y	Electrolytic 10µF/50V	CE04WIH100MB (SSL)

Ref. No.	Part No.	Part Name	Remarks
C415,416		Ceramic chip 0.01µF/50V	CK73MB1H103KR
C417	9L0 8900 43M	Ceramic 0.01µF/16V	CG14X1C103MB
C418~420		Ceramic chip 0.01µF/50V	CK73MB1H103KR
C421	9L0 8000 48R	Electrolytic 100µF/10V	CE04W1A101MB (SME)
C422		Ceramic chip 0.01µF/50V	CK73MB1H103KR
C423	9L0 8000 12Y	Electrolytic 4.7µF/50V	CE04W1H4R7MB (SSL)
C424		Ceramic chip 0.047µF/50V	CK73MB1H473KR
C425		Ceramic chip 0.047µF/50V	CK73MB1H473KR, Asia model only
C426		Ceramic chip 1000 pF/50V	CK73MSL1H102ϑP
C427,428		Ceramic chip 560 pF/50V	CK73MSL1H561ϑP
C429		Ceramic chip 1000 pF/50V	CK73MB1H102KR, Asia model only
C430		Ceramic chip 0.047µF/50V	CK73MB1H473KR, Asia model only
C451	9L0 8000 74F	Electrolytic 470µF/16V	CE04W1C471MB (SME)
C452~454		Ceramic chip 0.01µF/50V	CK73MB1H103KR
C801~803		Ceramic chip 560 pF/50V	CK73MSL1H561JR
C901		Ceramic chip 0.01µF/50V	CK73MB1H103KR, Asia model only
C902		Ceramic chip 0.1µF/16V	CK73MB1C104KR, Asia model only
C903		Ceramic chip 330 pF/50V	CK73MSL1H331JR, Asia model only
C904		Ceramic chip 4700 pF/50V	CK73MB1H472KR, Asia model only
C905	9L0 8001 07R	Electrolytic 0.47µF/50V	CE04W1HR47MB (SRA), Asia model only
C906	9L0 8001 39R	Electrolytic 47µF/10V	CE04W1A470MB (SRA), Asia model only
C907		Ceramic chip 330 pF/50V	CK73MSL1H331JR, Asia model only
C910		Ceramic chip 0.047µF/50V	CK73MB1H473KR, Asia model only
C911	9L0 8000 48R	Electrolytic 100µF/10V	CE04W1A101MB (SME), Asia model only
C912	9L0 8000 72R	Electrolytic 470µF/6.3V	CE04W0J471MB (SME), Asia model only
C913		Ceramic chip 1000 pF/50V	CK73MSL1H102JB, Asia model only
C914	9L0 8000 58R	Electrolytic 220µF/16V	CE04W1C221MB (SME), Asia model only
C915	9L0 8000 57R	Electrolytic 220µF/10V	CE04W1A221MB (SME), Asia model only
C916		Ceramic chip 0.1µF/16V	CK73MB1C104KR, Asia model only
C917	9L0 8000 57R	Electrolytic 220µF/10V	CE04W1A221MB (SME), Asia model only
C918		Ceramic chip 0.1µF/16V	CK73MB1C104KR, Asia model only
C919		Ceramic chip 0.01µF/50V	CK73MB1H103KR, Asia model only
C921	9LH 2400 68	Ceramic 0.1µF/50V	CK14F1H104ZB050, Asia model only

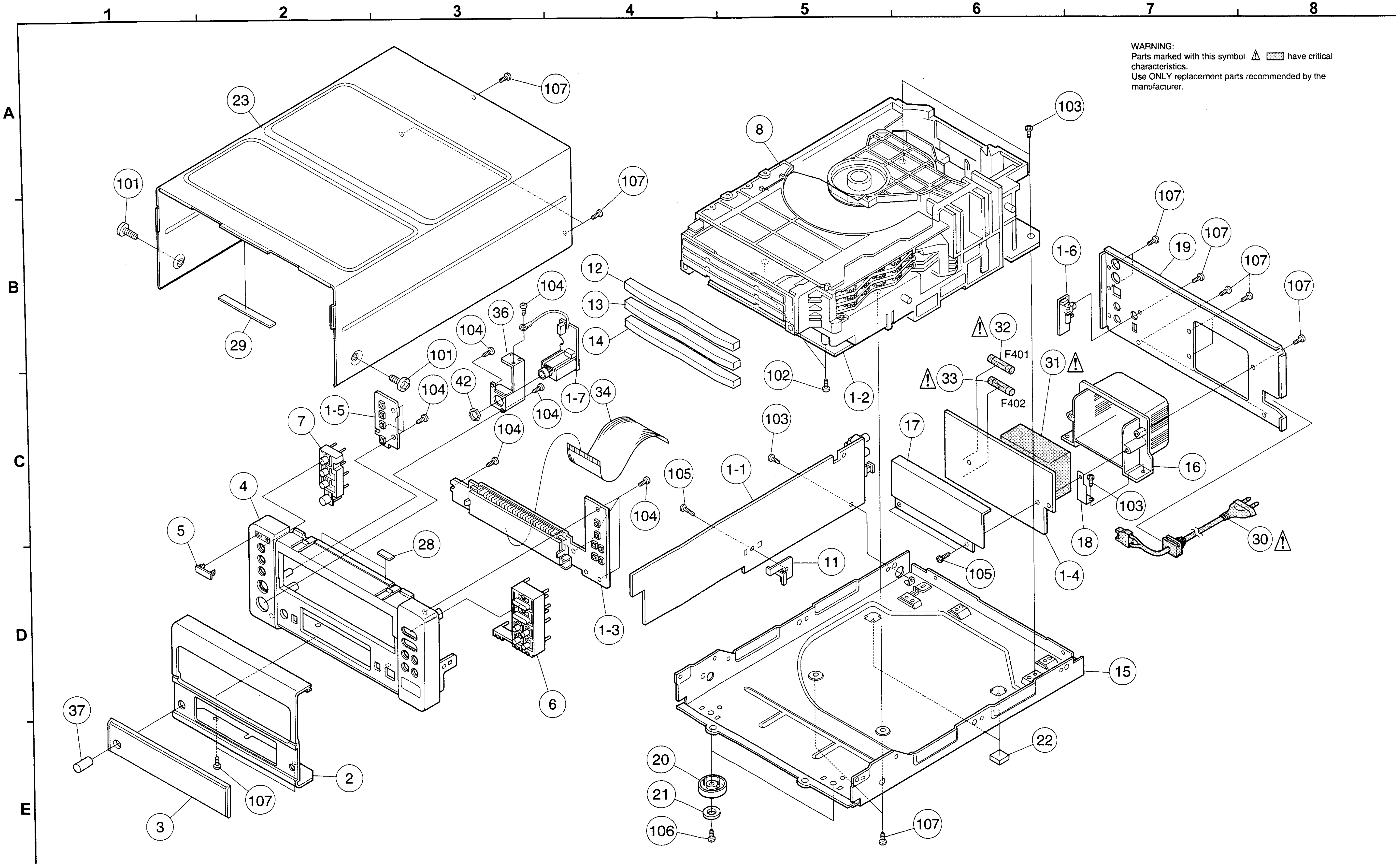
Ref. No.	Part No.	Part Name	Remarks	Q'ty
C922	9L0 8900 35M	Ceramic 1000 pF/16V	CG14X1C102MB, Asia model only	
OTHER PARTS GROUP				
CN401	9L2 9753 75	5P PH board-in		1
CN404	9L2 71 16 34A	2P TXL connector		1
CN421	9L2 71 15 34A	5P connector	Asia model only	1
CN451	9LE D017 13	8P BTEM connector		1
CN452,453	9LE D017 12	18P BTEM connector		2
CN501	9L2 71 16 42A	3P TXL connector		1
CN901	9L2 71 16 55A	4P TXL connector	Asia model only	1
CN902	9L2 71 16 50A	4P TXL connector	Asia model only	1
E001~004	9L2 7292 52R	Fuse holder	For F401,402	4
E100	9L0 5444 08	Lug terminal	Asia model only	1
E101	9L0 5444 08	Lug terminal		1
E801	9LN J023 21	FL holder		1
E802	9LM D041 31	Shield plate (A)	Asia model only	1
E804	9LM D032 02	Shield plate (C)	Asia model only	1
FL801	9LD D000 71	FL tube (6-ST-59GK)		1
J1~J7		Carbon chip 0 ohm 1/32W	RMC73M-1F000JR	7
J8		Carbon chip 0 ohm 1/32W	RMC73M-1F000JR, Asia model only	1
J30,31		Carbon chip 0 ohm 1/32W	RMC73M-1F000JR, Asia model only	1
J40,41		Carbon chip 0 ohm 1/32W	RMC73M-1F000JR, Asia model only	2
J51~62		Carbon chip 0 ohm 1/32W	RMC73M-1F000JR	12
J64~66		Carbon chip 0 ohm 1/32W	RMC73M-1F000JR	3
JK201	9LE R004 02	2P US pin jack		1
JK211,212	9L2 6714 13	Remocon jack		2
JK901	9LE R005 42	Mic jack	Asia model only	1
JK902	9LE R002 42	1P US pin jack	Asia model only	1
L301L,301R	9LB M002 61R	Chip inductor	MMZ1608R102A	2
L302L,302R	9LB M002 61R	Chip inductor	MMZ1608R102A	2
L303,304	9LB M002 61R	Chip inductor	MMZ1608R102A	2
L451	9L2 1222 39M	LA axial coil 100KF		1
L901	9L2 2279 14M	Axial coil 3R3	Asia model only	1
LF001	9L2 1695 11	LX-ZCAT 1518-0730 line clamp filter	Europe & U.K. models only	1
N901	9L4 7874 06	Heat sink	Asia model only	1
PG001	9LE D017 71	PLG-VH plug 2P4S		1
PG101	9L2 6742 65	6P MX pin post		1
PG102	9L2 9590 56	7P PH pin post		1
PG103	9L2 9590 57	8P PH pin post		1
PG401	9L2 9590 54	PH plug (5P)		1
PG402	9L2 6742 65	6P MX pin post		1
PG403	9L2 6742 64	5P MX pin post		1
PG404	9L2 6586 91W	TXL(L) pin post 2P		1
PG421	9L2 6586 74W	5P TXL pin post	Asia model only	1
PG451	9LE D017 33	8P BTEM pin post		1
PG452,453	9LE D017 32	18P BTEM pin post		2
PG454	9LE D017 21	30P BTEM pin post	Asia model only	1
PG501	9L2 6586 92W	3P pin post (TXL 2mm)		1
PG801	9L2 6989 86	FFC connector 29P		1
PG802	9L2 6989 93	FFC connector 29P (L)		1
PG901,902	9L2 6586 73W	4P TXL plug	Asia model only	2
P1~3	9L5 7152 35	1 SQ pin		3
P4	9L2 6883 63W	1 SQ pin		1
S1	9LF E002 21R	Tact switch (SKHVBB)		1
S801~803	9LF E002 21R	Tact switch (SKHVBB)	Asia model only	3
S804~812	9LF E002 21R	Tact switch (SKHVBB)		9
S901	9L2 6225 21	SW-SL2-2	Asia model only	1
T001	9L3 9737 31	Bar lock tie	Europe & U.K. models only	1
W301		UL wire L=50 BLK	Asia model only	1
W705A		NOTE		1
W705B		UL wire L=180 blue	Asia model only	1
W707		UL wire L=200 BLK		1
X301	9L2 7802 27	Crystal 16.9344MHz		1
X421	9LB P001 41	Ceramic 8.00MHz		1
#B23	9L8 6714 08	Screw 3x8 DT	Asia model only	1
#B24	9L8 6714 04	Screw 3x4 DT bind	Asia model only	1

ADDENDUM PARTS LIST OF CDC/VCD P.W.B. UNIT ASS'Y

Ref. No.	Part Name	Part No.			Remarks	Q'ty
		U.S.A. & Canada	Europe & U.K.	Asia		
RESISTORS GROUP						
R181	Carbon chip 0 ohm 1/32W	—	—	Need	RMC73M-1F000JR	
R181	Carbon chip 330 ohm 1/32W	Need	Need	—	RMC73M-1F331JR	
R182	Carbon chip 0 ohm 1/32W	—	—	Need	RMC73M-1F000JR	
R182	Carbon chip 330 ohm 1/32W	Need	Need	—	RMC73M-1F331JR	
R183	Carbon chip 0 ohm 1/32W	—	—	Need	RMC73M-1F000JR	
R183	Carbon chip 330 ohm 1/32W	Need	Need	—	RMC73M-1F331JR	
R311	Carbon chip 0 ohm 1/32W	Need	Need	—	RMC73M-1F000JR	
CAPACITORS GROUP						
C401C	Electrolytic 1000 µF/16V	9L0 8000 82F	9L0 8000 82F	—	CE04W1C102F (SME)	
C401C	Electrolytic 2200 µF/16V	—	—	9L0 8003 67F	CE04W1C222F	
OTHER PARTS GROUP						
W705A	UL wire L=50 BLK	Need	Need	—		

CD AUTO CHANGER SECTION

EXPLODED VIEW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WARNING:
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

PARTS LIST OF EXPLODED VIEW

CD AUTO CHANGER SECTION

※ As for "Note" in Part No., refer to ADDENDUM PARTS LIST.

Ref. No.	Part No.	Part Name	Remarks	Q'ty
1	NOTE	NOTE		1
1-1		Main unit		
1-2		Motor unit		
1-3		FL unit		
1-4		PT unit		
1-5		Keypad unit		
1-6		Video unit	Asia model only	
1-7		Mic unit	Asia model only	
2	NOTE	Front panel AL (UDCM)	Aluminum	1
3	NOTE	Clear panel (UDCM)	Window	1
4	NOTE	Front panel (UDCM)	Plastic molding	1
5	9LP U003 31	DENON badge		1
6	NOTE	Button (P)		1
7	NOTE	Play button (UDCM)		1
8	9LU C004 51	3-CD changer mecha		1
★ 9	9LM N006 12	Protect sheet		1
★ 10	9LM M001 71	Wire clamper		1
11	9LN J023 31	PWB holder		1
12	NOTE	CD loader panel (1)		1
13	NOTE	CD loader panel (2)		1
14	NOTE	CD loader panel (3)		1
15	9LN Q046 01	Bottom chassis		1
16	9LN J023 11	PT. cover		1
17	9LM E010 91	Shield sheet		1
18	9LN A254 11	Earth plate (pt)		1
19	NOTE	Rear plate		1
20	9LN M007 31	Foot (30)		2
21	9LM S002 11	Felt		2
22	9LM Q000 35	Leg		2
23	9LQ A009 13	Top cover		1
★ 24	NOTE	Origin label	Place of origin	1
★ 25	9L4 9303 12	Number sheet		1
★ 26	9LQ N021 81	Caution label		1
★ 27	9LS U018 51	Protect paper		1
28	9L4 8583 32	Spacer 14x8		2
29	9L4 8583 36	Spacer 60x8		1
⚠ 30	NOTE	AC cord	AP1	1
⚠ 31	NOTE	Power trans	PT001	1
⚠ 32	NOTE	NOTE	F401	1
⚠ 33	NOTE	NOTE	F402	1
34	9LE K010 22	29P FFC cable (P=1.25)	W101	1
★ 35	9L3 9737 31	Bar lock tie		NOTE
36	9LN A292 01	Phone bracket	Asia model only	1
37	9LP C021 73	Mic knob	Asia model only	1
★ 38	9L4 9485 11	Fuse caution label	U.S.A. & Canada models only	1
★ 39	9LQ K000 51	Manufacturd label	U.S.A. & Canada models only	1
★ 40	9L4 9642 02	UL caution label	U.S.A. & Canada models only	1
★ 41	9LQ L004 61	Class label	Asia model only	1
42	9LM K003 21	Nut M12x1	Asia model only	1
★ 43	9L2 1695 13	Line clamp filter	LF002, Asia model only	1
★ 44	9L4 9485 13	Caution label	U.S.A. & Canada models only	1
SCREWS				
101	9L8 6796 06	Screw 4x6 DT bind B		2
102	9L8 6913 08	Screw 2.6x8 BT bind		2
103	9L8 6914 08	Screw 3x8 BT bind		NOTE
104	9L8 6914 10	Screw 3x10 BT bind		7
105	9L8 6914 14	Screw 3x14 BT bind		3
106	9L8 6994 06	Screw 3x6 BT bind B		2
107	9L8 6994 10	Screw 3x10 BT bind B		NOTE
PACKING & ACCESSORIES (Not included EXPLODED VIEW.)				
201	NOTE	Carton box		1
202	9LS P053 71	Cushion	For UDRA	2
203	9LS P054 01	Cushion CD	For UDCM	2
204	NOTE	Poly sack		2
205	9L3 6276 61	Poly sack	For AC cord	2
206	9LQ T308 21	Warranty card ass'y	U.S.A. & Canada models only	1
207	NOTE	UPC label		1
207	NOTE	EAN label		1
208	9LS X006 91	Origin label	Asia model only	1
209	NOTE	Control label		1
210	NOTE	Poly sack		1
211	9L2 7132 25	1P US Pin cord	Asia model only	1
212	9LE W034 82	2P US Pin cord		1
213	9LE W034 92	System cord		1
214	9L2 7593 41	AM loop ant.		1
215	9LE F021 33	FM ant.		1
216	NOTE	Instruction manual		1
217		Battery		1
218	NOTE	NOTE		1
218	NOTE	NOTE		1

ADDENDUM PARTS LIST OF EXPLODED VIEW

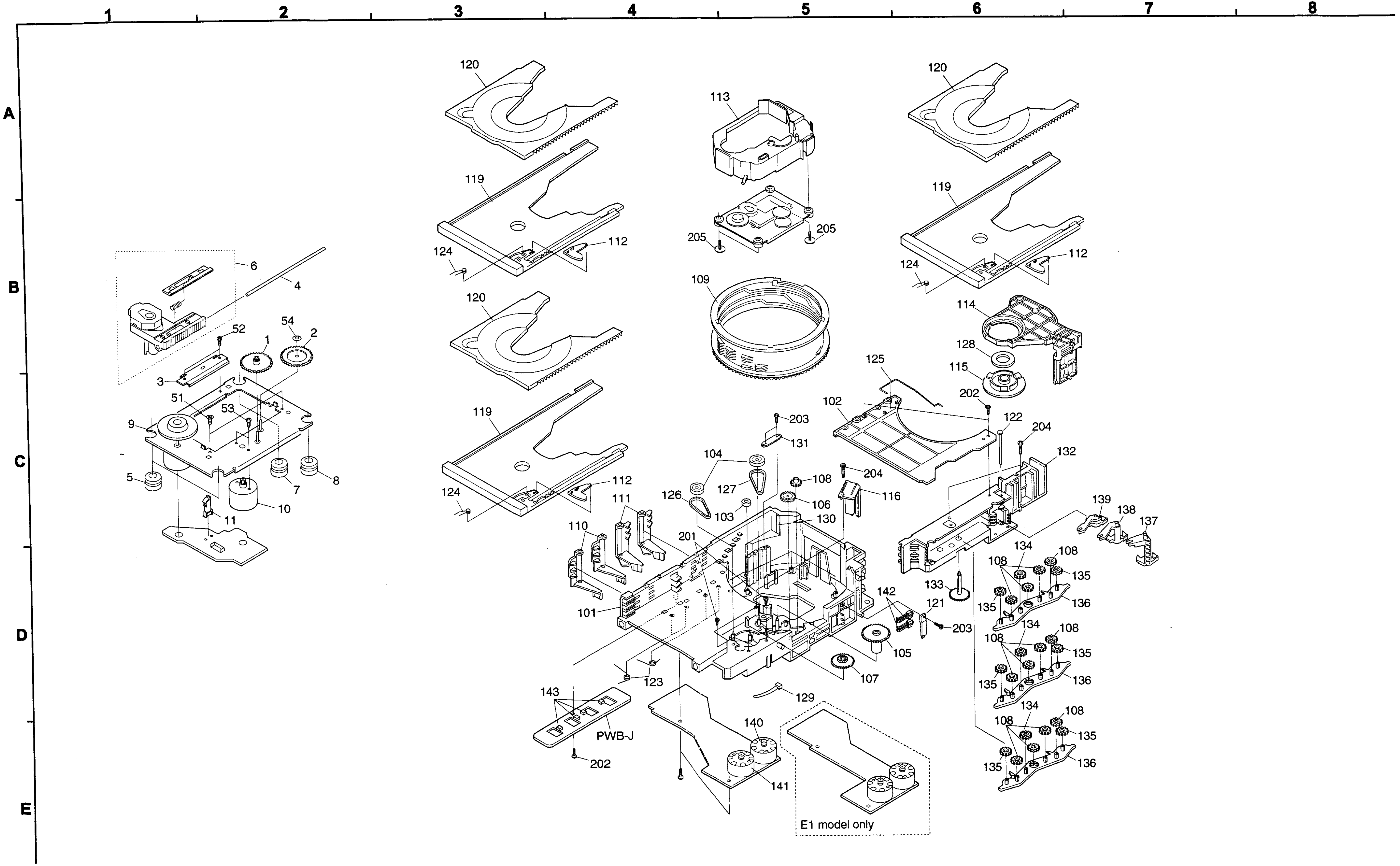
CD AUTO CHANGER SECTION

Ref. No.	Part Name	U.S.A/Canada		Europe		U.K.		Asia		Remarks
		Part No.	Q'ty	Part No.	Q'ty	Part No.	Q'ty	Part No.	Q'ty	
1	CDC P.W.B. unit ass'y	9LJ T083 71		9LJ T083 72		9LJ T083 73		—		
1	VCD P.W.B. unit ass'y	—		—		—		9LJ T083 76		
2	Front panel AL (UDCM)	9LP M065 71		9LP M065 71		9LP M065 71		9LP M065 72		Aluminum
3	Clear panel (UDCM)	9LP H058 24		9LP H058 24		9LP H058 24		9LP H059 31		Window
4	Front panel (UDCM)	9LP H059 41		9LP H059 41		9LP H059 41		9LP H059 42		Plastic molding
6	Button (P)	9LP C031 51		9LP C031 51		9LP C031 51		9LP C031 52		
7	Play button (UDCM)	9LP C031 11		9LP C031 11		9LP C031 11		9LP C031 12		
12	CD loader panel (1)	9LP H059 11		9LP H059 11		9LP H059 11		9LP H059 14		
13	CD loader panel (2)	9LP H059 12		9LP H059 12		9LP H059 12		9LP H059 15		
14	CD loader panel (3)	9LP H059 13		9LP H059 13		9LP H059 13		9LP H059 16		
19	Rear plate	9LQ A012 51		9LQ A012 52		9LQ A012 52		9LQ A012 53		
★ 24	Origin label	9L4 9313 06		9LQ NO29 74		9LQ NO29 74		9L4 9313 06		Place of origin
⚠ 30	AC cord	9LE V007 02		9LE V005 85		9LE V005 85		9LE V005 85		AP1
⚠ 31	Power trans	9LB T009 02		9LB T009 03		9LB T009 03		9LB T009 61		PT001
⚠ 32	Fuse 800mA 250V	9L2 7224 69		—		—		—		F401
⚠ 32	Fuse T630mA	—		9L2 7280 72		9L2 7280 72		9L2 7280 72		F401
⚠ 33	Fuse 800mA 250V	9L2 7224 69		—		—		—		F402
⚠ 33	Fuse T630mA	—		9L2 7280 72		9L2 7280 72		9L2 7280 72		F402
★ 35	Bar lock tie	9L3 9737 31	3	9L3 9737 31	3	9L3 9737 31	3	9L3 9737 31	4	
SCREWS										
103	Screw 3x8 BT bind	9L8 6914 08	5	9L8 6914 08	5	9L8 6914 08	5	9L8 6914 08	7	
107	Screw 3x10 BT bind B	9L8 6994 10	14	9L8 6994 10	14	9L8 6994 10	14	9L8 6994 10	15	

ADDENDUM PARTS LIST OF PACKING & ACCESSORIES

Ref. No.	Part Name	Part No.				Remarks	Q'ty
		U.S.A. & Canada	Europe	U.K.	Asia		
PACKING & ACCESSORIES (Not included EXPLODED VIEW.)							
201	Carton box	9LS G080 11	9LS G080 12	9LS G080 12	9LS G080 13		1
204	Poly sack	9LS U010 20	9LS U010 20	9LS U010 21	9LS U010 20		2
207	UPC label	9LQ N019 96	—	—	—		1
207	EAN label	—	9LQ N028 01	9LQ N028 04	—		1
209	Control label	9LQ N027 61	9LQ N027 62	9LQ N027 63	9LQ N027 64		1
210	Poly sack	9L3 6402 14W	9L3 6402 14W	9L3 6402 13W	9L3 6402 14W		1
216	Instruction manual	9LQ R263 31	9LQ R263 32	9LQ R263 32	9LQ R263 33		1
218	Remote controller RC-846	9LH L009 03	9LH L009 03	9LH L009 03	—		1
218	Remote controller RC-847	—	—	—	9LH L009 04		1

EXPLODED VIEW OF CD MECHANISM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E1 model only

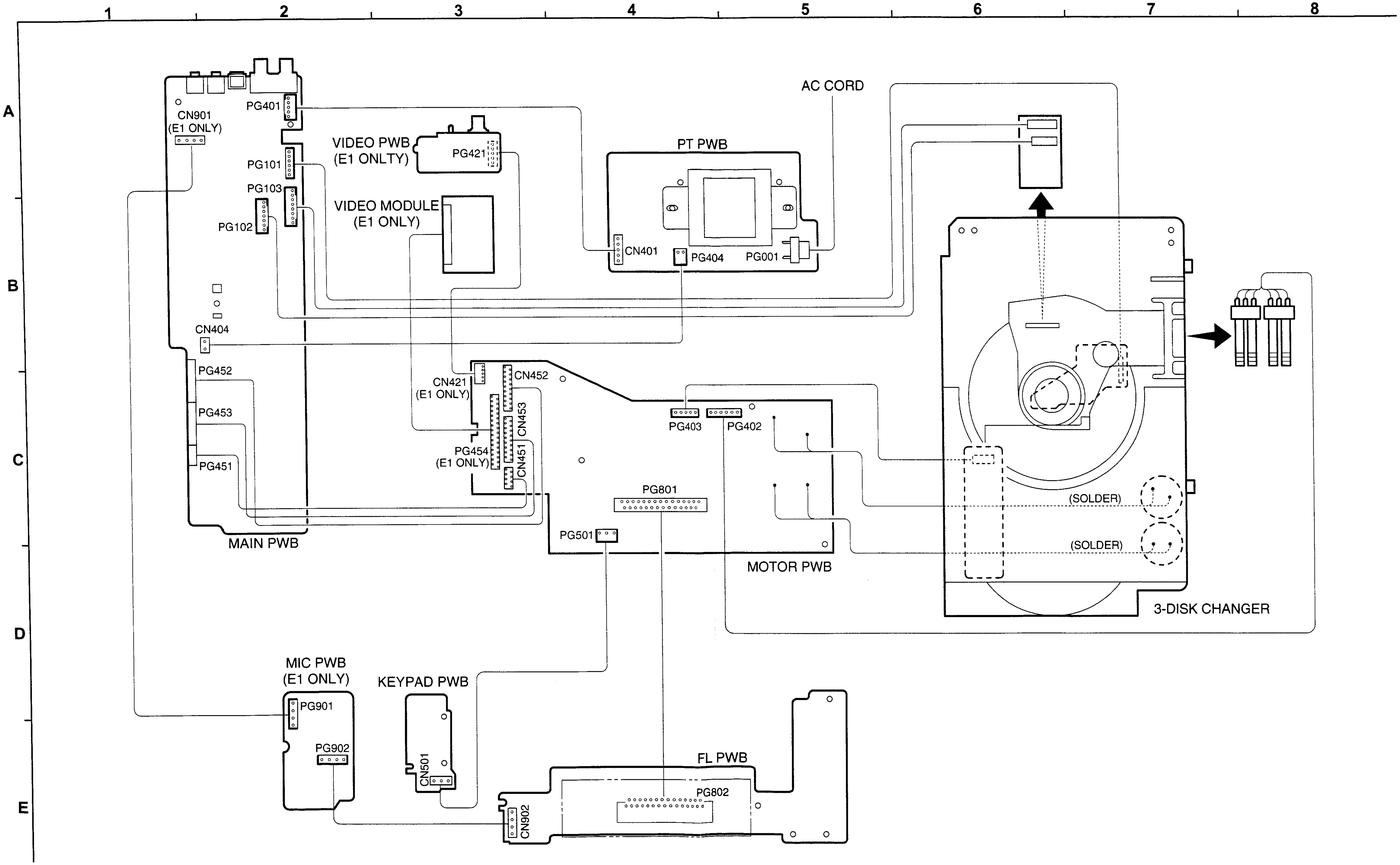
PARTS LIST OF CD CHANGER MECHANISM UNIT (Part No. : 9LU C004 51)

Ref. No.	Part No.	Part Name	Remarks	Q'ty
LOADER MECH. SECTION				
101	937 0233 003	Main base	1242070025	1
102	937 0233 100	Top board	1242000146	1
103	937 0233 207	Cam guide roller	1242870011	3
104	937 0233 304	Drive pulley	1102860025	2
105	937 0233 401	Idler gear	1242810041	1
106	937 0233 508	Cam gear	1242810042	1
107	937 0233 605	Middle gear	1242810043	1
108	937 0233 702	Tray idler gear	1242810046	12
109	937 0233 809	Main cam	1242410001	1
110	937 0233 906	Front switch lever	1242480078	2
111	937 0234 002	Rear switch lever Ass'y	1242480115	2
112	937 0234 109	Tray lock lever	1242480080	3
113	937 0234 206	Mecha holder	1243450005	1
114	937 0234 303	Stabilizer holder	1243450006	1
115	937 0234 400	Stabilizer	1242140101	1
116	937 0234 507	Mecha holder guide	1243450004	1
119	937 0234 604	Guide tray	1241100051	3
120	937 0234 701	Disk tray	1241100052	3
121	937 0234 808	Switch angle	1242000147	1
122	937 0234 905	Tray change shaft	1242900077	1
123	937 0235 001	Tray switch spring	1242580117	4
124	937 0235 108	Tray lock lever spring	1242580119	3
125	937 0235 111	Disk stop spring	1242580118	1
126	937 0235 205	Tray drive belt	1242710003	1
127	937 0235 302	Cam drive belt	1242710004	1
128	937 0235 409	Magnet	1103730019	1
129	445 0033 005	Nylon band (L=80mm)	1309330057	2
130	937 0235 506	Rubber sheet	1243520009	1
131	937 0235 603	Mecha holder angle	1242000192	1
132	937 0235 700	Change box	1242070027	1
133	937 0235 807	Center gear	1242810044	1
134	937 0235 904	Center tray gear	1242810045	3
135	937 0236 000	Tray drive gear	1242810047	6
136	937 0236 107	Tray change lever	1242480074	3
137	937 0236 204	Top joint lever	1242480075	1
138	937 0236 301	Middle joint lever	1242480076	1
139	937 0236 408	Bottom joint lever	1242480077	1
140	937 0236 602	Motor Ass'y	1246300041 for main cam	1
141	937 0236 602	Motor Ass'y	1246300041 for tray	1
142	937 0236 709	Cam switch	1245300022	2
143	937 0041 606	Tray switch	1305301248	4
201	937 0236 505	Screw 2.6x4	1309700139	4
202	937 0236 518	Screw 2x7	1429700216	3
203	937 0236 521	Screw 2x6	1429700120	3
204	937 0182 947	Screw 2.6x12	1429700072	4
205	937 0231 047	Screw with washer 2.6x10	1129700192	4

Ref. No.	Part No.	Part Name	Remarks	Q'ty
TRAVERES SECTION				
1	937 0121 005	Middle gear	1102810126	1
2	937 0121 102	Draiv gear	1102810127	1
3	937 0121 209	Guide railroller	1102480681	1
4	937 0121 306	Guide shaft	1102900223	1
5	937 0121 403	Gum cushion (gray)	1303260448	2
6	937 0227 103	Pickup unit	1306170020	1
7	937 0164 305	Gum cushion (green)	1103260278	1
8	937 0164 208	Gum cushion (red)	1103260275	1
9	937 0150 607	Chassis with motor Ass'y	1106300208	1
10	937 0122 004	Slide motor Ass'y	1106300207	1
11	937 0122 208	Limit switch	1105300522	1
51	937 0121 801	Screw 2.6x6	1109700937	2
52	937 0121 814	Screw 2x5	1109700938	2
53	937 0121 827	Screw 2x3	1309701564	2
54	937 0121 908	Cut washer φ1.5xφ3.8x0.25mm	1109900315	1

CD AUTO CHANGER SECTION

WIRING DIAGRAM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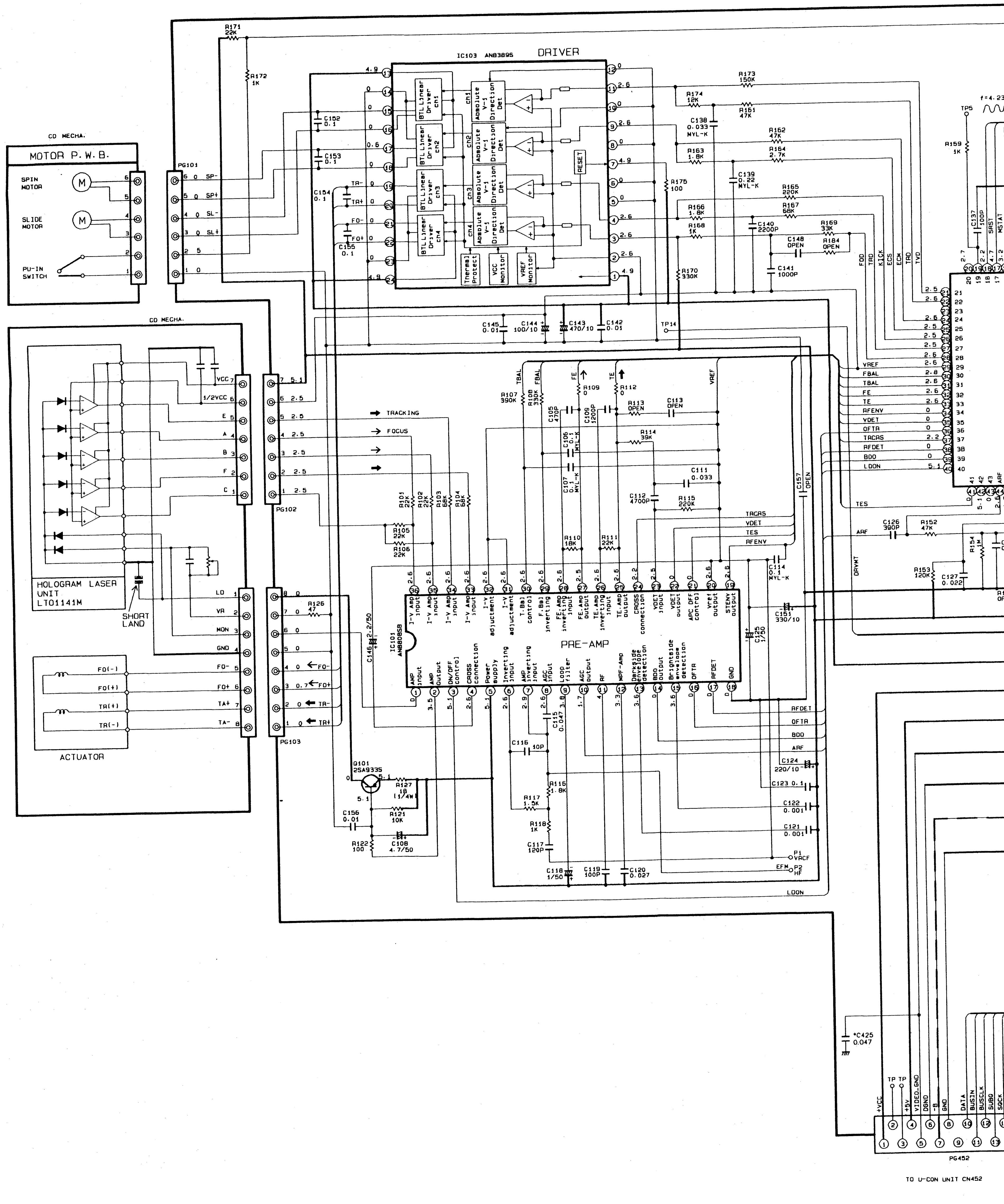
A
B
C
D
E
CN901
(E1 ONLY)
PG401
PG101
PG103
PG102
VIDEO PWB
(E1 ONLTY)
PG421
VIDEO MODULE
(E1 ONLY)
PT PWB
AC CORD
CN401
PG404
PG001
CN404
PG452
PG453
PG451
MAIN PWB
CN421
(E1 ONLY)
CN452
CN453
PG454
(E1 ONLY)
CN451
PG403
PG402
PG801
PG501
MOTOR PWB
(SOLDER)
(SOLDER)
3-DISK CHANGER
MIC PWB
(E1 ONLY)
PG901
PG902
KEYPAD PWB
CN501
FL PWB
PG802
CN902

SCHEMATIC DIAGRAMS (1/3)

1 2 3 4 5


CD MECHA.
MOTOR P.W.B.
SPIN MOTOR
SLIDE MOTOR
PU-IN SWITCH
PG101
R171 22K
R172 1K
IC103 AN8389S
DRIVER
BTL Linear Driver ch1
BTL Linear Driver ch2
BTL Linear Driver ch3
BTL Linear Driver ch4
Absolute V-I Direction Det
RESET
Thermal Protect
VCC Monitor
VREF Monitor
C152 0.1
C153 0.1
C154 0.1
C155 0.1
R173 150K
R174 12K
R161 47K
C138 0.033 MYL-K
R162 47K
R163 1.8K
R164 2.7K
C139 0.22 MYL-K
R175 100
R165 220K
R166 1.8K
R167 68K
R168 1K
C140 2200P
R169 33K
C148 OPEN
R184 OPEN
C141 1000P
R170 330K
C145 0.01
C144 100/10
C143 470/10
C142 0.01
TP14
HOLOGRAM LASER UNIT LT01141M
SHORT LAND
ACTUATOR
PG102
PG103
TRACKING
FOCUS
R101 22K
R102 22K
R103 68K
R104 68K
R105 22K
R106 22K
R107 390K
R108 330K
R109 0
R112 0
R113 OPEN
C113 OPEN
R114 39K
C105 470P
C109 1200P
C106 0.1 MYL-K
C107 0.1 MYL-K
C111 0.033
C112 4700P
R115 220K
R110 18K
R111 22K
C157 OPEN
C114 0.1 MYL-K
C151 330/10
IC101 AN8805SB
PRE-AMP
C146 2.2/50
C125 1/50
R126 47
Q101 2SA933S
R127 18 (1/4W)
R121 10K
C156 0.01
R122 100
C108 4.7/50
C116 10P
C115 0.047
R116 1.8K
R117 1.5K
R118 1K
C117 120P
C118 1/50
C119 100P
C120 0.027
C124 220/10
C123 0.1
C122 0.001
C121 0.001
P1 VRCF
EFM P2 HF
LDON
TP5
R159 1K
C137 100P
C126 390P
R152 47K
R154 1M
R153 120K
C127 0.022
*C425 0.047
PG452
TO U-CON UNIT CN452

NOTICE

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM

ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD

EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.

CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:

Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

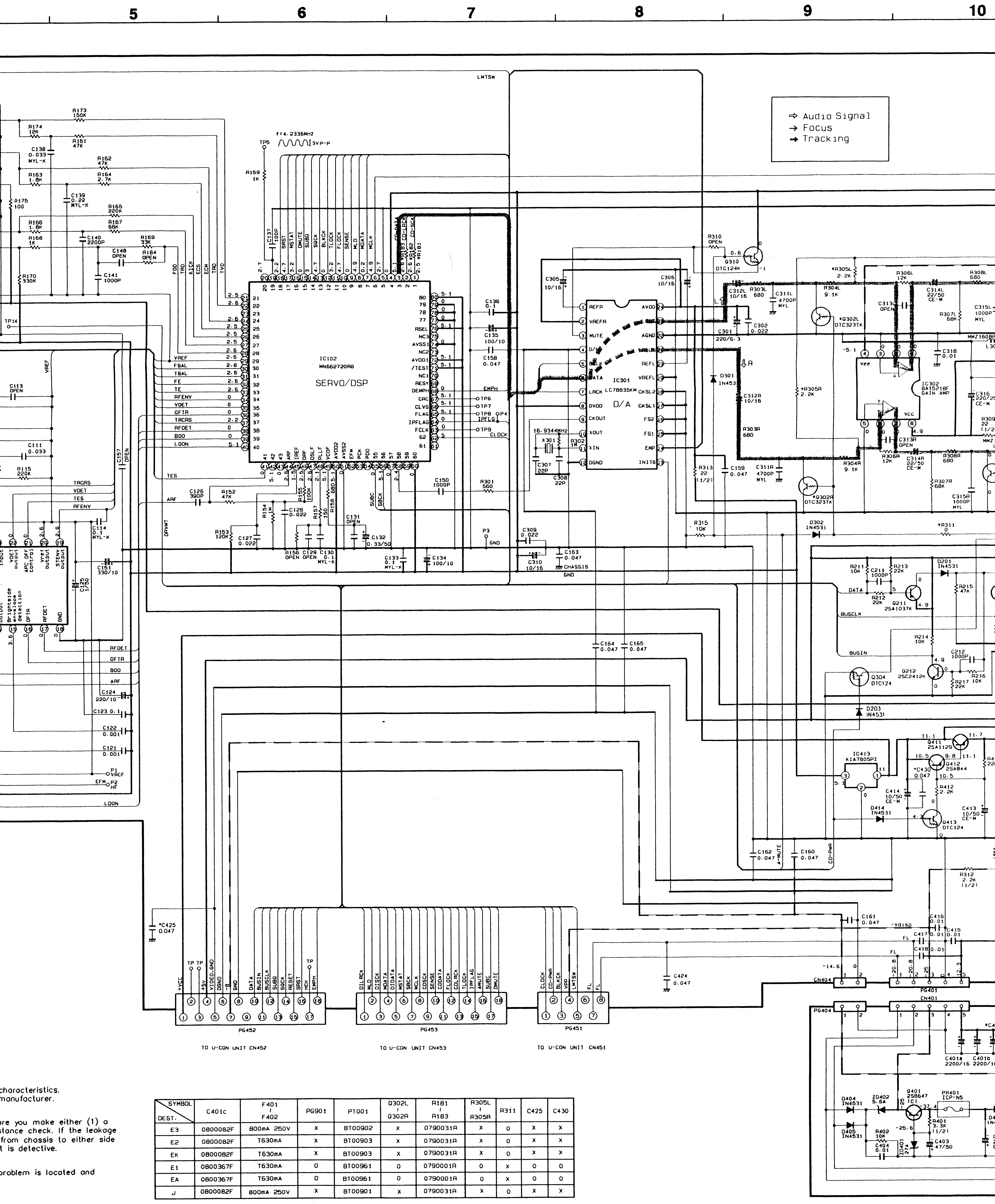
CAUTION:

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 460 kohms, the unit is detective.

WARNING:

DO NOT return the unit to the customer until the problem is located and corrected.

SYMBOL / DEST.	C401c	F401 / F402
E3	0800082F	800mA 25
E2	0800082F	T630mA
EK	0800082F	T630mA
E1	0800367F	T630mA
EA	0800367F	T630mA
J	0800082F	800mA 25

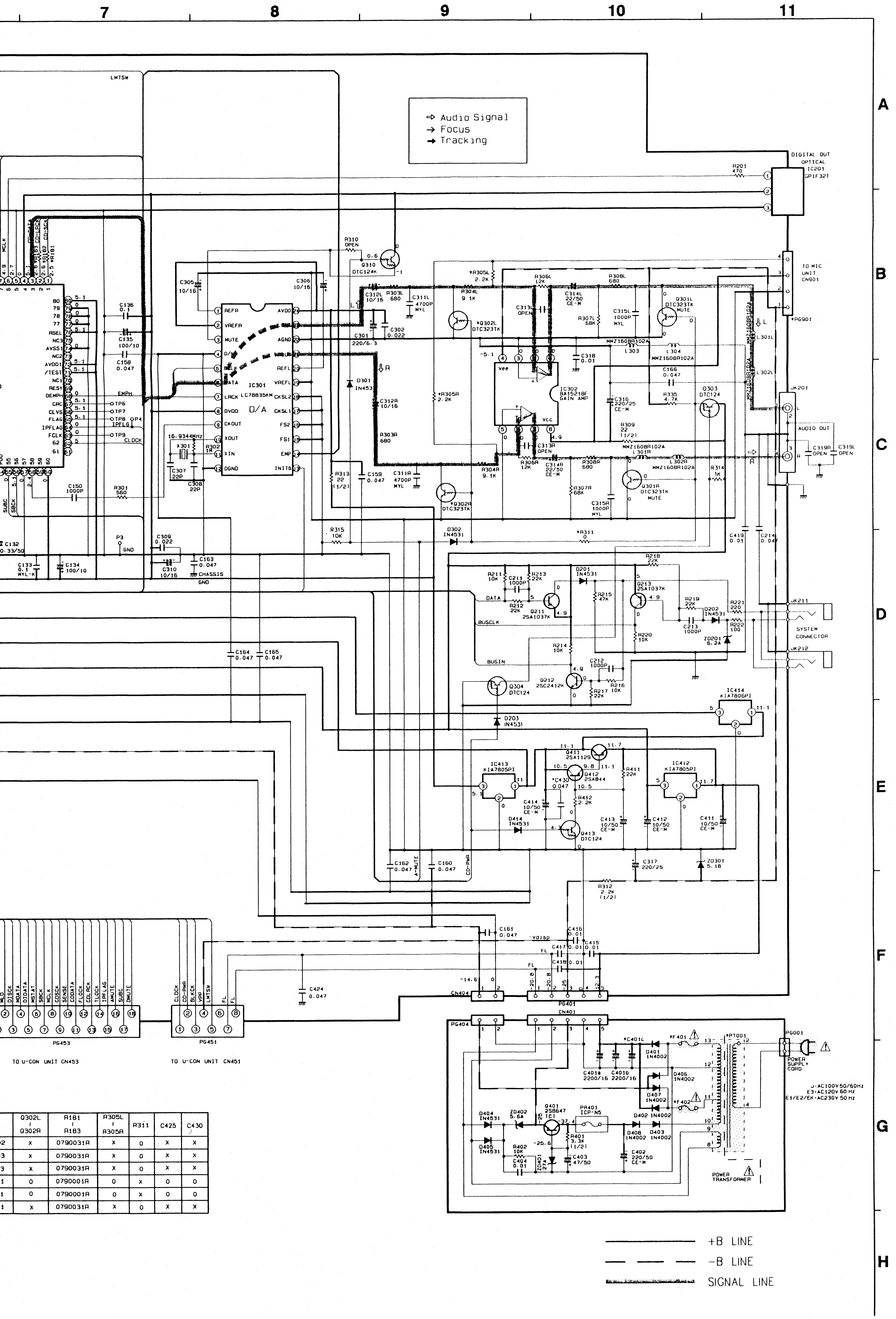

5
6
7
8
9
10
⇨ Audio Signal
→ Focus
➔ Tracking
IC102
MN662720RB
SERVO/DSP
IC301 LC78835KM
D/A
IC302
BA15218F
GAIN AMP
IC413
KIA7805PI
f=4.2336MHZ
3VP-P
16.9344MHZ
X301
LMTSW
TP5
TP14
GND
CHASSIS
CN404
PG401
CN401
PG404
PG452
TO U-CON UNIT CN452
PG453
TO U-CON UNIT CN453
PG451
TO U-CON UNIT CN451
Q401
2SB647
PR401
ICP-N5

characteristics.
manufacturer.

ure you make either (1) a
stance check. If the leakage
from chassis to either side
t is detective.

problem is located and

SYMBOL / DEST.	C401c	F401 / F402	PG901	PT001	Q302L / Q302R	R181 / R183	R305L / R305R	R311	C425	C430
E3	0800082F	800mA 250V	X	BT00902	X	0790031R	X	0	X	X
E2	0800082F	T630mA	X	BT00903	X	0790031R	X	0	X	X
EK	0800082F	T630mA	X	BT00903	X	0790031R	X	0	X	X
E1	0800367F	T630mA	0	BT00961	0	0790001R	0	X	0	0
EA	0800367F	T630mA	0	BT00961	0	0790001R	0	X	0	0
J	0800082F	800mA 250V	X	BT00901	X	0790031R	X	0	X	X
]


7
8
9
10
11
A
B
C
D
E
F
G
H
⇨ Audio Signal
→ Focus
➜ Tracking
LMTSW
DIGITAL OUT OPTICAL IC201 GP1F32T
R201 470
TO MIC UNIT CN901
PG901
R310 OPEN
Q310 DTC124K
IC301 LC78835KM D/A
REFA
VREFA
MUTE
BCLK
DATA
LRCK
DVDD
CKOUT
XOUT
XIN
DGND
AVDD
AGND
REFL
VREFL
CKSL2
CKSL1
FS2
FS1
EMP
INITB
16.9344MHz
X301
C305 10/16
C306 10/16
C136 0.1
C135 100/10
C158 0.047
C150 1000P
R301 560
C307 22P
C308 22P
R302 1M
C309 0.022
C310 10/16
C163 0.047
CHASSIS GND
P3 GND
C132 0.33/50
C133 0.1 MYL-K
C134 100/10
TP6
TP7
TP8 OP4
TP9
EMPH
IPFLG
CLOCK
C312L 10/16
R303L 680
C311L 4700P MYL
C302 0.022
C301 220/6.3
C312R 10/16
R303R 680
D301 1N4531
R313 22 (1/2)
C159 0.047
C311R 4700P MYL
R315 10K
D302 1N4531
Q302R DTC323TK
Q302L DTC323TK
R305L 2.2K
R305R 2.2K
R304L 9.1K
R304R 9.1K
R306L 12K
R306R 12K
C313L OPEN
C313R OPEN
C314L 22/50 CE-M
C314R 22/50 CE-M
R307L 68K
R307R 68K
R308L 680
R308R 680
C315L 1000P MYL
C315R 1000P MYL
Q301L DTC323TK MUTE
Q301R DTC323TK MUTE
IC302 BA15218F GAIN AMP
Vee
Vcc
C318 0.01
C316 220/25 CE-M
L303
L304 MMZ1608R102A
L301L
L302L
L301R
L302R MMZ1608R102A
C166 0.047
R335 4.7K
Q303 DTC124
R309 22 (1/2)
R314 1K
JK201
AUDIO OUT
C319R OPEN
C319L OPEN
R311
C419 0.01
C214 0.047
R218 22K
R211 10K
C211 1000P
R213 22K
R212 22K
DATA
BUSCLK
BUSIN
Q211 2SA1037K
D201 1N4531
R215 47K
Q213 2SA1037K
R219 22K
D202 1N4531
C213 1000P
R221 220
R222 100
ZD201 6.2A
R220 10K
JK211
SYSTEM CONNECTOR
JK212
R214 10K
C212 1000P
Q212 2SC2412K
R216 10K
R217 22K
Q304 DTC124
D203 1N4531
IC414 KIA7806PI
IC413 KIA7805PI
IC412 KIA7805PI
Q411 2SA1129
Q412 2SA844
R411 22K
C430 0.047
R412 2.2K
C414 10/50 CE-M
D414 1N4531
Q413 DTC124
C413 10/50 CE-M
C412 10/50 CE-M
C411 10/50 CE-M
C317 220/25
ZD301 5.1B
C164 0.047
C165 0.047
C162 0.047
A-MUTE
C160 0.047
CD-PWR
R312 2.2K (1/2)
C161 0.047
C416 0.01
C417 0.01
C415 0.01
C418 0.01
C424 0.047
CN404
PG401
CN401
PG404
PG453
TO U-CON UNIT CN453
PG451
TO U-CON UNIT CN451
CLOCK
CD-PWR
BLKCK
VPP
LMTSW
FL
C401c
F401
PT001
PG001
POWER SUPPLY CORD
J:AC100V 50/60Hz
E3:AC120V 60 Hz
E1/E2/EK:AC230V 50 Hz
D401 1N4002
C401a 2200/16
C401b 2200/16
D406 1N4002
D407 1N4002
F402
D404 1N4531
ZD402 5.6A
Q401 2SB647 (C)
PR401 ICP-N5
D402 1N4002
D408 1N4002
D403 1N4002
D405 1N4531
R402 10K
C404 0.01
ZD401 27A
R401 3.3K (1/2)
C403 47/50
C402 220/50 CE-M
POWER TRANSFORMER

	Q302L / Q302R	R181 / R183	R305L / R305R	R311	C425	C430
2	x	0790031R	x	0	x	x
3	x	0790031R	x	0	x	x
3	x	0790031R	x	0	x	x
1	0	0790001R	0	x	0	0
1	0	0790001R	0	x	0	0
1	x	0790031R	x	0	x	x

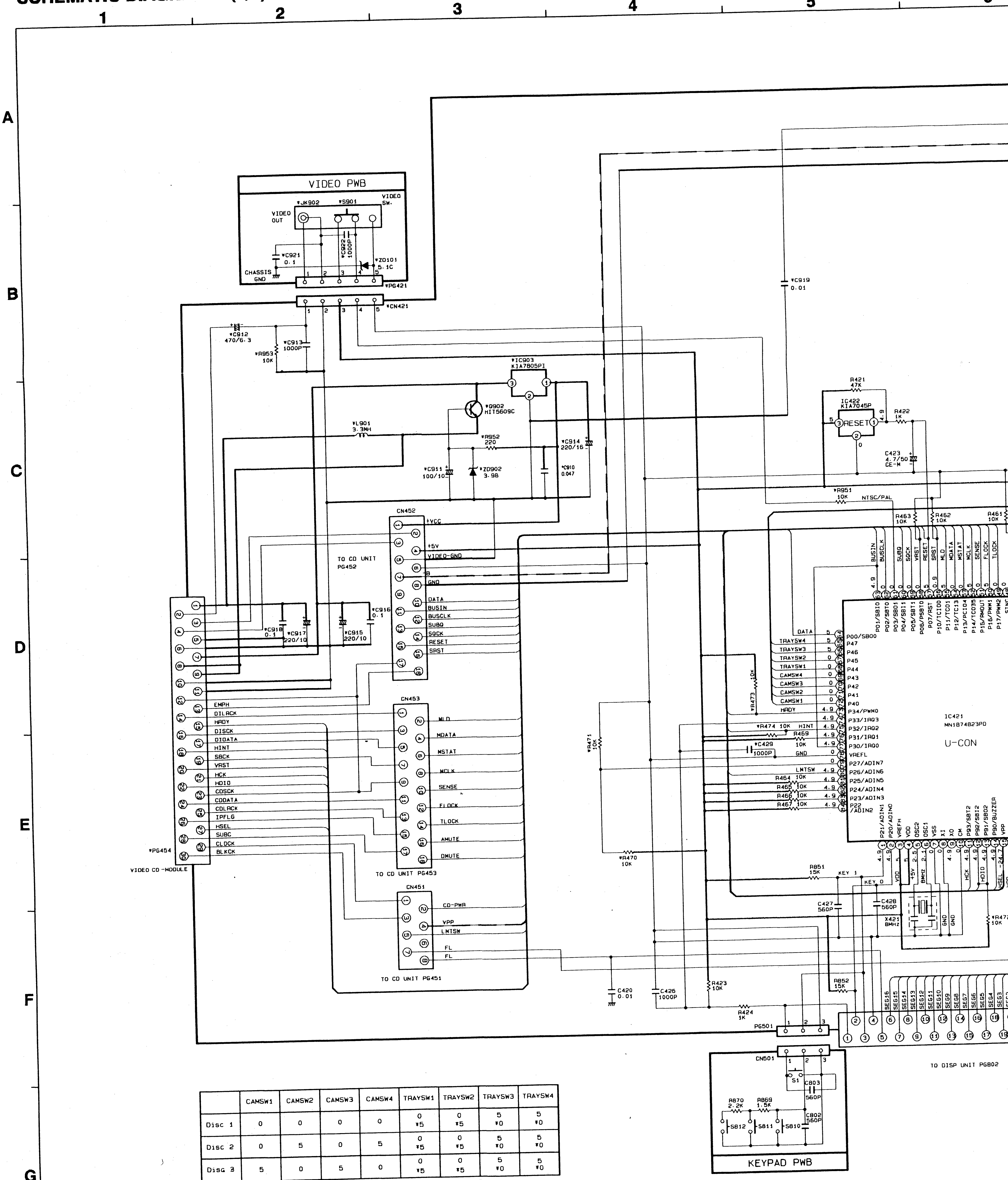
+B LINE

−B LINE

SIGNAL LINE

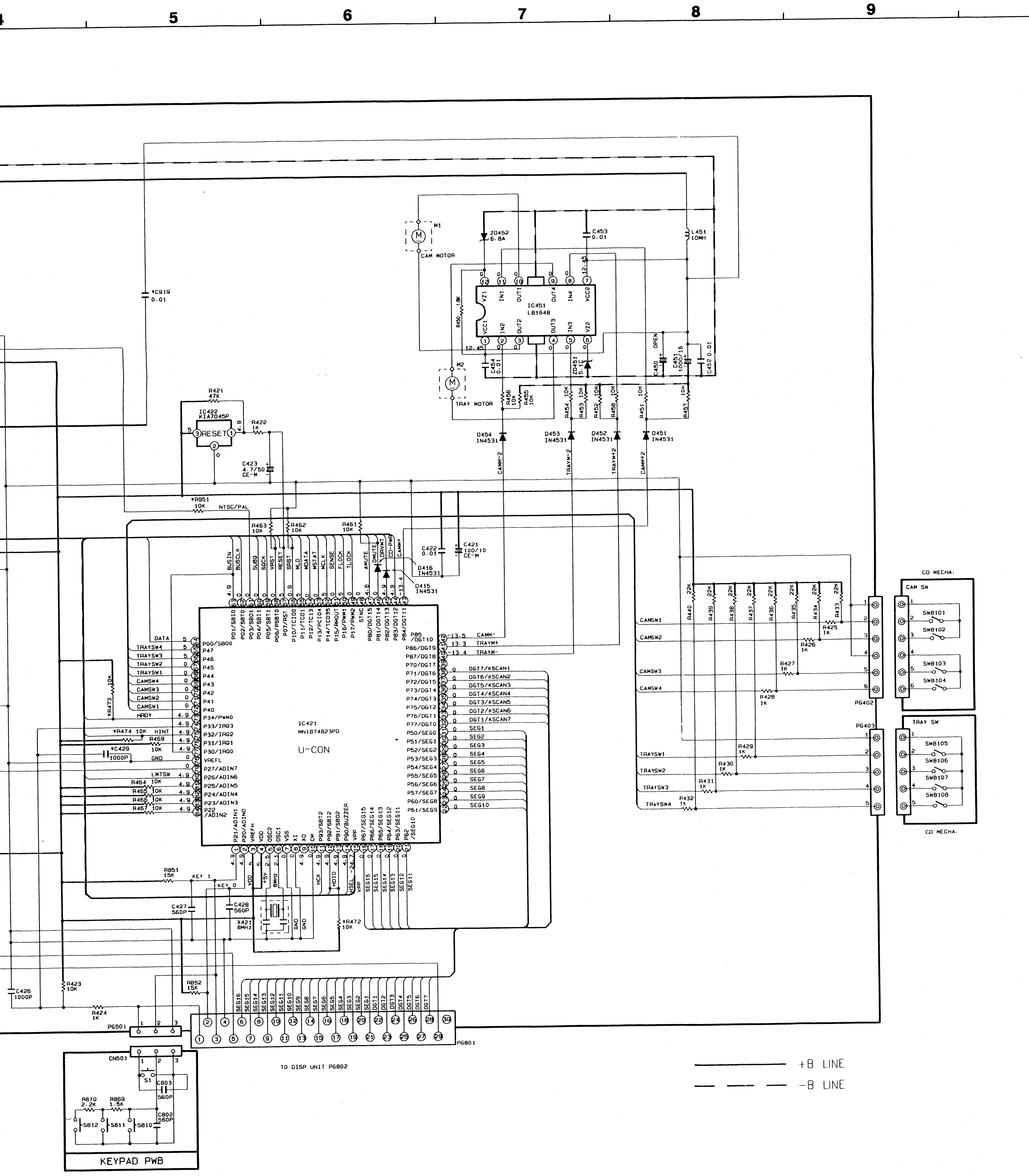
CD AUTO CHANGER SECTION

SCHEMATIC DIAGRAMS (2/3)


1
2
3
4
5
6
A
B
C
D
E
F
G
H
VIDEO PWB
*JK902
*S901
VIDEO SW.
VIDEO OUT
*C921 0.1
*C922 1000P
*ZD101 5.1C
CHASSIS GND
*PG421
*CN421
*C912 470/6.3
*C913 1000P
*R953 10K
*IC903 KIA7805PI
*Q902 HIT5609C
*L901 3.3mH
*R952 220
*C914 220/16
*C911 100/10
*ZD902 3.9B
*C910 0.047
*C919 0.01
CN452
+VCC
+5V
VIDEO-GND
B
GND
DATA
BUSIN
BUSCLK
SUBQ
SQCK
RESET
SRST
TO CD UNIT PG452
*C918 0.1
*C917 220/10
*C915 220/10
*C916 0.1
EMPH
DILRCK
HRDY
DISCK
DIDATA
HINT
SBCK
VRST
HCK
HDIO
CDSCK
CDDATA
CDLRCK
IPFLG
HSEL
SUBC
CLOCK
BLKCK
*PG454
VIDEO CD-MODULE
CN453
MLD
MDATA
MSTAT
MCLK
SENSE
FLOCK
TLOCK
AMUTE
DMUTE
TO CD UNIT PG453
CN451
CD-PWR
VPP
LMTSW
FL
FL
TO CD UNIT PG451
R421 47K
IC422 KIA7045P
RESET
R422 1K
C423 4.7/50 CE-M
*R951 10K
NTSC/PAL
R463 10K
R462 10K
R461
BUSIN
BUSCLK
SUBQ
SQCK
VRST
RESET
SRST
MLD
MDATA
MSTAT
MCLK
SENSE
FLOCK
TLOCK
TRAYSW4
TRAYSW3
TRAYSW2
TRAYSW1
CAMSW4
CAMSW3
CAMSW2
CAMSW1
HRDY
*R473 10K
*R474 10K HINT
R469 10K
*C429 1000P
GND
LMTSW
R464 10K
R465 10K
R466 10K
R467 10K
*R471 10K
*R470 10K
P00/SBO0
P47
P46
P45
P44
P43
P42
P41
P40
P34/PWM0
P33/IRQ3
P32/IRQ2
P31/IRQ1
P30/IRQ0
VREFL
P27/ADIN7
P26/ADIN6
P25/ADIN5
P24/ADIN4
P23/ADIN3
P22 /ADIN2
P01/SBI0
P02/SBT0
P03/SBO1
P04/SBI1
P05/SBT1
P06/PSBT0
P07/RST
P10/TCI00
P11/TCO1
P12/TCI3
P13/PCI04
P14/TCO35
P15/RMOUT
P16/PWM1
P17/PWM2
P21/ADIN1
P20/ADIN0
VREFH
VDD
OSC2
OSC1
VSS
XI
XO
CM
P93/SBT2
P92/SBI2
P91/SBO2
P90/BUZZER
VPP
IC421 MN1874823PD
U-CON
R851 15K
KEY 1
KEY 0
C427 560P
C428 560P
X421 8MHz
*R472 10K
HCK
HDIO
HSEL
GND
GND
C420 0.01
C426 1000P
R423 10K
R424 1K
R852 15K
PG501
SEG16
SEG15
SEG14
SEG13
SEG12
SEG11
SEG10
SEG9
SEG8
SEG7
SEG6
SEG5
SEG4
SEG3
TO DISP UNIT PG802
CN501
S1
C803 560P
R870 2.2K
R869 1.5K
C802 560P
S812
S811
S810
KEYPAD PWB

	CAMSW1	CAMSW2	CAMSW3	CAMSW4	TRAYSW1	TRAYSW2	TRAYSW3	TRAYSW4
Disc 1	0	0	0	0	0 *5	0 *5	5 *0	5 *0
Disc 2	0	5	0	5	0 *5	0 *5	5 *0	5 *0
Disc 3	5	0	5	0	0 *5	0 *5	5 *0	5 *0

SYMBOL / DEST.	C429	C910 ~ C919	C921 ~ C922	CN421	IC903	JK902	L901	PG421	PG454	Q902	R470	R471 ~ R474	R951 ~ R953	S901	ZD101	ZD902
E3	X	X	X	X	X	X	X	X	X	X	X	0	X	X	X	X
E2	X	X	X	X	X	X	X	X	X	X	X	0	X	X	X	X
EK	X	X	X	X	X	X	X	X	X	X	X	0	X	X	X	X
E1	0	0	0	0	0	0	0	0	0	0	0	X	0	0	0	0
EA	0	0	0	0	0	0	0	0	0	0	0	X	0	0	0	0
J	X	X	X	X	X	X	X	X	X	X	X	0	X	X	X	X


4
5
6
7
8
9
M1
CAM MOTOR
M2
TRAY MOTOR
ZD452 6.8A
C453 0.01
L451 10MH
IC451 LB1648
VZ1
IN1
OUT1
OUT4
IN4
VCC2
VCC1
IN2
OUT2
OUT3
IN3
VZ2
R450 1.8K
12.45
C454 0.01
ZD451 5.1C
OPEN
C450
C451 1000/16
C452 0.01
R456 10K
R455 10K
R454 10K
R453 10K
R452 10K
R458 10K
R451 10K
R457 10K
D454 IN4531
D453 IN4531
D452 IN4531
D451 IN4531
CAMM-2
TRAYM-2
TRAYM+2
CAMM+2
C919 0.01
R421 47K
IC422 KIA7045P
RESET
R422 1K
C423 4.7/50 CE-M
R951 10K
NTSC/PAL
R463 10K
R462 10K
R461 10K
C422 0.01
C421 100/10 CE-M
D416 IN4531
D415 IN4531
IC421 MN1874823PD
U-CON
CAMM-
TRAYM+
TRAYM-
DATA
TRAYSW4
TRAYSW3
TRAYSW2
TRAYSW1
CAMSW4
CAMSW3
CAMSW2
CAMSW1
HRDY
R473 10K
R474 10K
HINT
R459 10K
C429 1000P
GND
LNTSW
R464 10K
R465 10K
R466 10K
R467 10K
DGT7/KSCAN1
DGT6/KSCAN2
DGT5/KSCAN3
DGT4/KSCAN4
DGT3/KSCAN5
DGT2/KSCAN6
DGT1/KSCAN7
SEG1
SEG2
SEG3
SEG4
SEG5
SEG6
SEG7
SEG8
SEG9
SEG10
R851 15K
KEY 1
KEY 0
C427 560P
C428 560P
X421 8MHZ
R472 10K
R423 10K
C426 1000P
R424 1K
R852 15K
PG501
PG801
TO DISP UNIT PG802
CN501
S1
C803 560P
R870 2.2K
R869 1.5K
S812
S811
S810
C802 560P
KEYPAD PWB
CD MECHA.
CAM SW
SW8101
SW8102
SW8103
SW8104
PG402
PG403
TRAY SW
SW8105
SW8106
SW8107
SW8108
R440 22K
R439 22K
R438 22K
R437 22K
R436 22K
R435 22K
R434 22K
R433 22K
R425 1K
R426 1K
R427 1K
R428 1K
R429 1K
R430 1K
R431 1K
R432 1K
+B LINE
-B LINE

302
X
X
X
0
0
X

NOTICE

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM

ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD

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WARNING:

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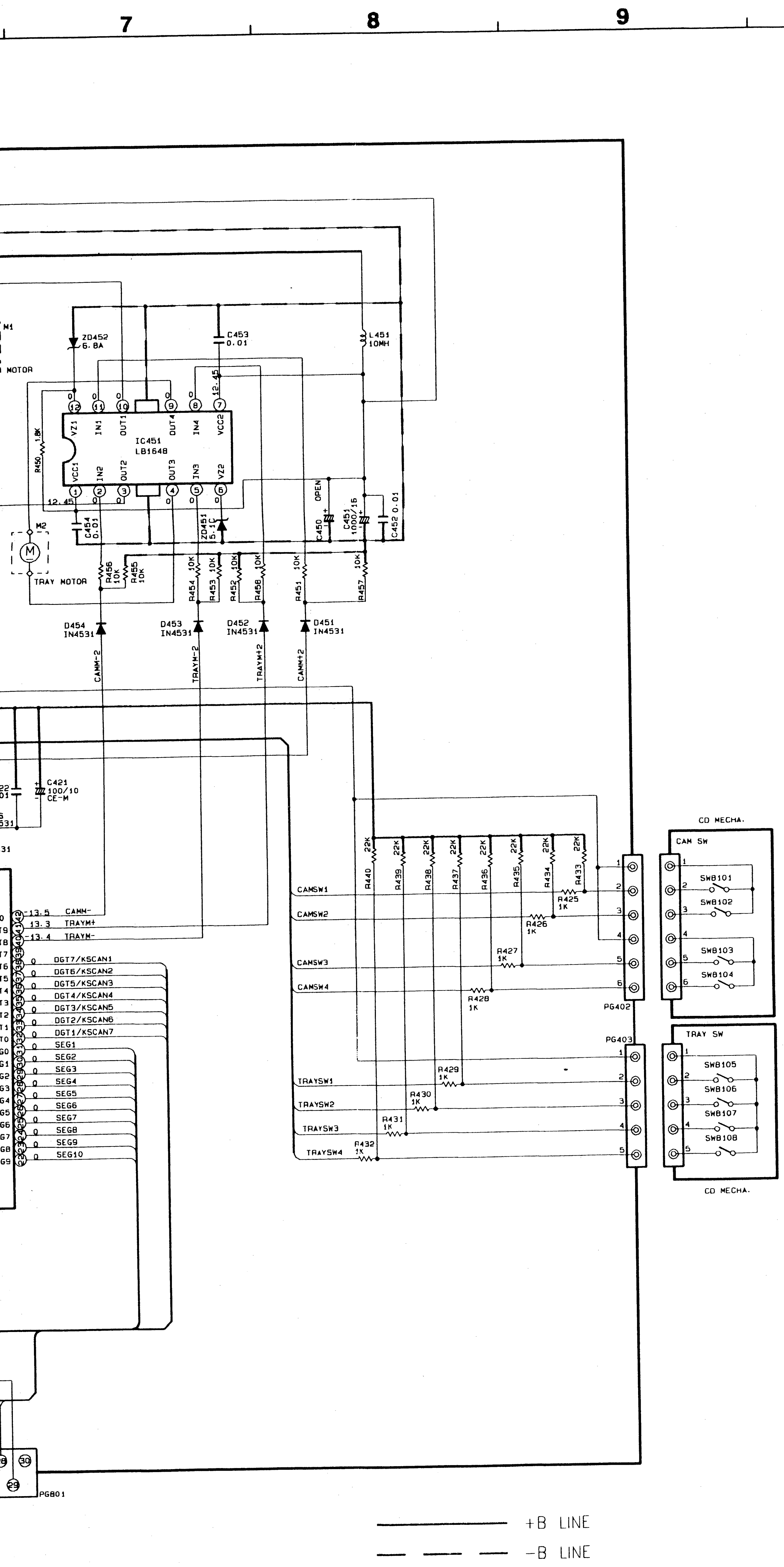
Use ONLY replacement parts recommended by the ma

CAUTION:

Before returning the unit to the customer, make sure
leakage current check or (2) a line to chassis resisto
current exceeds 0.5 milliamps, or if the resistance fr
of the power cord is less than 460 kohms, the unit i

WARNING:

DO NOT return the unit to the customer until the pro
corrected.


7
8
9
10
11
ZD452 6.8A
C453 0.01
L451 10MH
MOTOR
IC451 LB1648
VZ1
IN1
OUT1
OUT4
IN4
VCC2
VCC1
IN2
OUT2
OUT3
IN3
VZ2
R450 1.8K
12.45
M2
TRAY MOTOR
C454 0.01
ZD451 5.1C
OPEN
C450
C451 1000/16
C452 0.01
R456 10K
R455 10K
R454 10K
R453 10K
R452 10K
R458 10K
R451 10K
R457 10K
D454 IN4531
D453 IN4531
D452 IN4531
D451 IN4531
CAMM-2
TRAYM-2
TRAYM+2
CAMM+2
C421 100/10 CE-M
CAMM-
TRAYM+
TRAYM-
13.5
13.3
13.4
DGT7/KSCAN1
DGT6/KSCAN2
DGT5/KSCAN3
DGT4/KSCAN4
DGT3/KSCAN5
DGT2/KSCAN6
DGT1/KSCAN7
SEG1
SEG2
SEG3
SEG4
SEG5
SEG6
SEG7
SEG8
SEG9
SEG10
R440 22K
R439 22K
R438 22K
R437 22K
R436 22K
R435 22K
R434 22K
R433 22K
CAMSW1
CAMSW2
CAMSW3
CAMSW4
R425 1K
R426 1K
R427 1K
R428 1K
PG402
PG403
TRAYSW1
TRAYSW2
TRAYSW3
TRAYSW4
R429 1K
R430 1K
R431 1K
R432 1K
CD MECHA.
CAM SW
SWB101
SWB102
SWB103
SWB104
TRAY SW
SWB105
SWB106
SWB107
SWB108
PG801
+B LINE
-B LINE

NOTICE

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ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD

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WARNING:

Parts marked with this symbol ⚠ ▨ have critical characteristics. Use ONLY replacement parts recommended by the manufacturer.

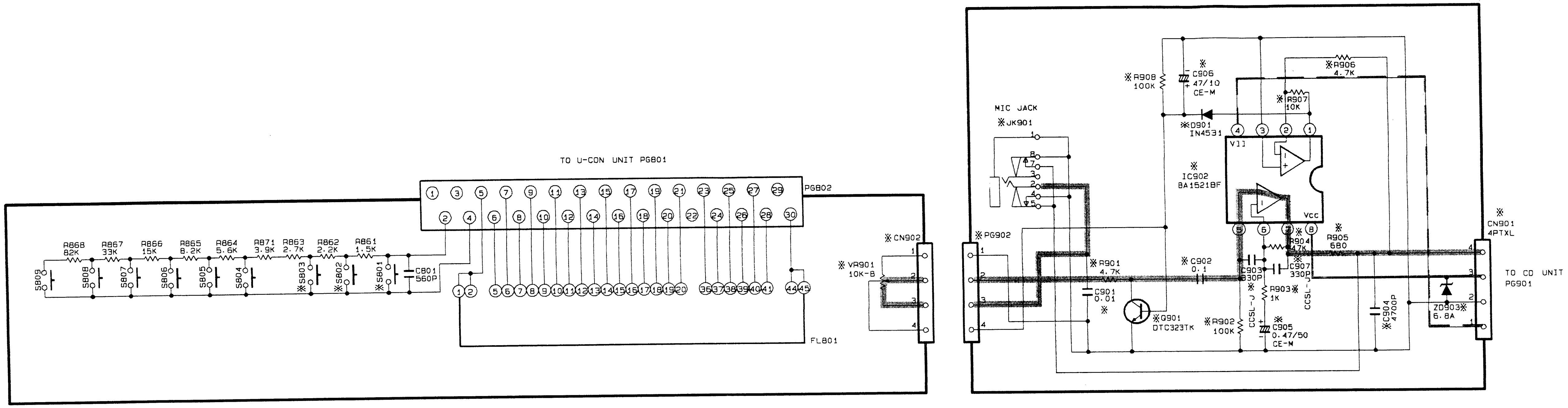
CAUTION:

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 460 kohms, the unit is detective.

WARNING:

DO NOT return the unit to the customer until the problem is located and corrected.

SCHEMATIC DIAGRAMS (3/3)


1
2
3
4
5
6
7
8
A
B
C
D
E
TO U-CON UNIT PG801
PG802
R868 82K
R867 33K
R866 15K
R865 8.2K
R864 5.6K
R871 3.9K
R863 2.7K
R862 2.2K
R861 1.5K
S809
S808
S807
S806
S805
S804
※S803
※S802
※S801
C801 560P
FL801
※CN902
※VR901 10K-B
MIC JACK
※JK901
※PG902
※R908 100K
※C906 47/10 CE-M
※D901 1N4531
※IC902 BA15218F
V11
Vcc
※R906 4.7K
※R907 10K
※R901 4.7K
※C901 0.01
※Q901 DTC323TK
※C902 0.1
※C903 330P
※R902 100K
※R903 1K
※C905 0.47/50 CE-M
CCSL-J
※R904 47K
※C907 330P
※R905 680
※C904 4700P
※ZD903 6.8A
※CN901 4PTXL
TO CD UNIT PG901

※ Only for E1·EA

○ S801 - KARAOKE MPX	○ S807 - PAUSE
○ S802 - KEY CONTROL +	○ S808 - PLAY
○ S803 - KEY CONTROL -	○ S809 - DISC
○ S804 - SKIP	○ S810 - OPEN / CLOSE 3
○ S805 - SKIP	○ S811 - OPEN / CLOSE 2
○ S806 - STOP	○ S812 - OPEN / CLOSE 1
	○ S1 - ON / STANDBY

——— +B LINE

— — — -B LINE

▨ MIC SIGNAL LINE

NOTICE

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:

Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

CAUTION:

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 460 kohms, the unit is detective.

WARNING:

DO NOT return the unit to the customer until the problem is located and corrected.